PRACTICE PROBLEMS

1 Providing information about the performance and financial position of companies so that users can make economic decisions *best* describes the role of:
   - A auditing.
   - B financial reporting.
   - C financial statement analysis.

2 Which of the following *best* describes the role of financial statement analysis?
   - A To provide information about a company's performance
   - B To provide information about a company's changes in financial position
   - C To form expectations about a company's future performance and financial position

3 The role of financial statement analysis is *best* described as:
   - A providing information useful for making investment decisions.
   - B evaluating a company for the purpose of making economic decisions.
   - C using financial reports prepared by analysts to make economic decisions.

4 A company's financial position would *best* be evaluated using the:
   - A balance sheet.
   - B income statement.
   - C statement of cash flows.

5 A company's profitability for a period would *best* be evaluated using the:
   - A balance sheet.
   - B income statement.
   - C statement of cash flows.

6 The financial statement that presents a shareholder's residual claim on assets is the:
   - A balance sheet.
   - B income statement.
   - C cash flow statement.

7 A company's profitability over a period of time is *best* evaluated using the:
   - A balance sheet.
   - B income statement.
   - C cash flow statement.

8 The income statement is *best* used to evaluate a company's:
   - A financial position.
   - B sources of cash flow.
   - C financial results from business activities.

9 Accounting policies, methods, and estimates used in preparing financial statements are *most likely* to be found in the:
   - A auditor's report.
   - B management commentary.
   - C notes to the financial statements.

10 Information about management and director compensation are *least likely* to be found in the:

A auditor's report.

B proxy statement.

C notes to the financial statements.

11 Information about a company's objectives, strategies, and significant risks are *most likely* to be found in the:

A auditor's report.

B management commentary.

C notes to the financial statements.

12 Which of the following *best* describes why the notes that accompany the financial statements are required? The notes:

A permit flexibility in statement preparation.

B standardize financial reporting across companies.

C provide information necessary to understand the financial statements.

13 What type of audit opinion is preferred when analyzing financial statements?

A Qualified.

B Adverse.

C Unqualified.

14 An auditor determines that a company's financial statements are prepared in accordance with applicable accounting standards except with respect to inventory reporting. This exception is *most likely* to result in an audit opinion that is:

A adverse.

B qualified.

C unqualified.

15 An independent audit report is *most likely* to provide:

A absolute assurance about the accuracy of the financial statements.

B reasonable assurance that the financial statements are fairly presented.

C a qualified opinion with respect to the transparency of the financial statements.

16 Interim financial reports released by a company are *most likely* to be:

A monthly.

B unaudited.

C unqualified.

17 Which of the following sources of information used by analysts is found outside a company's annual report?

A Auditor's report

B Peer company analysis

C Management's discussion and analysis

18 Ratios are an input into which step in the financial statement analysis framework?

A Process data.

B Collect input data.

C Analyze/interpret the processed data.

19 Which phase in the financial statement analysis framework is *most likely* to involve producing updated reports and recommendations?

- **A** Follow-up
- **B** Analyze/interpret the processed data
- **C** Develop and communicate conclusions and recommendations

SOLUTIONS

1 B is correct. This is the role of financial reporting. The role of financial statement analysis is to evaluate the financial reports.

2 C is correct. In general, analysts seek to examine the past and current performance and financial position of a company in order to form expectations about its future performance and financial position.

3 B is correct. The primary role of financial statement analysis is to use financial reports prepared by companies to evaluate their past, current, and potential performance and financial position for the purpose of making investment, credit, and other economic decisions.

4 A is correct. The balance sheet portrays the company's financial position on a specified date. The income statement and statement of cash flows present different aspects of performance during the period.

5 B is correct. Profitability is the performance aspect measured by the income statement. The balance sheet portrays the financial position. The statement of cash flows presents a different aspect of performance.

6 A is correct. Owners' equity is the owners' residual interest in (i.e., residual claim on) the company's assets after deducting its liabilities, which is information presented on the balance sheet.

7 B is correct. A company's profitability is best evaluated using the income statement. The income statement presents information on the financial results of a company's business activities over a period of time by communicating how much revenue was generated and the expenses incurred to generate that revenue.

8 C is correct. A company's revenues and expenses are presented on the income statement, which is used to evaluate a company's financial results (or profitability) from business activities over a period of time. A company's financial position is best evaluated by using the balance sheet. A company's sources of cash flow are best evaluated using the cash flow statement.

9 C is correct. The notes disclose choices in accounting policies, methods, and estimates.

10 A is correct. Information about management and director compensation is not found in the auditor's report. Disclosure of management compensation is required in the proxy statement, and some aspects of management compensation are disclosed in the notes to the financial statements.

11 B is correct. These are components of management commentary.

12 C is correct. The notes provide information that is essential to understanding the information provided in the primary statements.

13 C is correct. An unqualified opinion is a "clean" opinion and indicates that the financial statements present the company's performance and financial position fairly in accordance with a specified set of accounting standards.

14 B is correct. A qualified audit opinion is one in which there is some scope limitation or exception to accounting standards. Exceptions are described in the audit report with additional explanatory paragraphs so that the analyst can determine the importance of the exception.

15 B is correct. The independent audit report provides reasonable assurance that the financial statements are fairly presented, meaning that there is a high probability that the audited financial statements are free from material error, fraud, or illegal acts that have a direct effect on the financial statements.

16 B is correct. Interim reports are typically provided semiannually or quarterly and present the four basic financial statements and condensed notes. They are not audited. Unqualified is a type of audit opinion

17 B is correct. When performing financial statement analysis, analysts should review all company sources of information as well as information from external sources regarding the economy, the industry, the company, and peer (comparable) companies.

18 C is correct. Ratios are an output of the process data step but are an input into the analyze/interpret data step.

19 A is correct. The follow-up phase involves gathering information and repeating the analysis to determine whether it is necessary to update reports and recommendations.

PRACTICE PROBLEMS

1 Which of the following is *most likely* not an objective of financial statements?
  - A To provide information about the performance of an entity.
  - B To provide information about the financial position of an entity.
  - C To provide information about the users of an entity's financial statements.

2 International financial reporting standards are currently developed by which entity?
  - A The IFRS Foundation.
  - B The International Accounting Standards Board.
  - C The International Organization of Securities Commissions.

3 US generally accepted accounting principles are currently developed by which entity?
  - A The Securities and Exchange Commission.
  - B The Financial Accounting Standards Board.
  - C The Public Company Accounting Oversight Board.

4 A core objective of the International Organization of Securities Commissions is to:
  - A eliminate systemic risk.
  - B protect users of financial statements.
  - C ensure that markets are fair, efficient, and transparent.

5 According to the *Conceptual Framework for Financial Reporting*, which of the following is *not* an enhancing qualitative characteristic of information in financial statements?
  - A Accuracy.
  - B Timeliness.
  - C Comparability.

6 Which of the following is *not* a constraint on the financial statements according to the *Conceptual Framework*?
  - A Understandability.
  - B Benefit versus cost.
  - C Balancing of qualitative characteristics.

7 The assumption that an entity will continue to operate for the foreseeable future is called:
  - A accrual basis.
  - B comparability.
  - C going concern.

8 The assumption that the effects of transactions and other events are recognized when they occur, not when the cash flows occur, is called:
  - A relevance.
  - B accrual basis.
  - C going concern.

9 Neutrality of information in the financial statements most closely contributes to which qualitative characteristic?

- A Relevance.
- B Understandability.
- C Faithful representation.

10 Valuing assets at the amount of cash or equivalents paid or the fair value of the consideration given to acquire them at the time of acquisition most closely describes which measurement of financial statement elements?

- A Current cost.
- B Historical cost.
- C Realizable value.

11 The valuation technique under which assets are recorded at the amount that would be received in an orderly disposal is:

- A current cost.
- B present value.
- C realizable value.

12 Which of the following is *not* a required financial statement according to IAS No. 1?

- A Statement of financial position.
- B Statement of changes in income.
- C Statement of comprehensive income.

13 Which of the following elements of financial statements is *most* closely related to measurement of performance?

- A Assets.
- B Expenses.
- C Liabilities.

14 Which of the following elements of financial statements is *most* closely related to measurement of financial position?

- A Equity.
- B Income.
- C Expenses.

15 Which of the following disclosures regarding new accounting standards provides the *most* meaningful information to an analyst?

- A The impact of adoption is discussed.
- B The standard will have no material impact.
- C Management is still evaluating the impact.

SOLUTIONS

1. C is correct. Financial statements provide information, including information about the entity's financial position, performance, and changes in financial position, to users. They do not typically provide information about users.
2. B is correct. The IASB is currently charged with developing International Financial Reporting Standards.
3. B is correct. The FASB is responsible for the Accounting Standards Codification™, the single source of nongovernmental authoritative US generally accepted accounting principles.
4. C is correct. A core objective of IOSCO is to ensure that markets are fair, efficient, and transparent. The other core objectives are to reduce, not eliminate, systemic risk and to protect investors, not all users of financial statements.
5. A is correct. Accuracy is not an enhancing qualitative characteristic. Faithful representation, not accuracy, is a fundamental qualitative characteristic.
6. A is correct. Understandability is an enhancing qualitative characteristic of financial information—not a constraint.
7. C is correct. The *Conceptual Framework* identifies two important underlying assumptions of financial statements: accrual basis and going concern. Going concern is the assumption that the entity will continue to operate for the foreseeable future. Enterprises with the intent to liquidate or materially curtail operations would require different information for a fair presentation.
8. B is correct. Accrual basis reflects the effects of transactions and other events being recognized when they occur, not when the cash flows. These effects are recorded and reported in the financial statements of the periods to which they relate.
9. C is correct. The fundamental qualitative characteristic of faithful representation is contributed to by completeness, neutrality, and freedom from error.
10. B is correct. Historical cost is the consideration paid to acquire an asset.
11. C is correct. The amount that would be received in an orderly disposal is realizable value.
12. B is correct. There is no statement of changes in income. Under IAS No. 1, a complete set of financial statements includes a statement of financial position, a statement of comprehensive income, a statement of changes in equity, a statement of cash flows, and notes comprising a summary of significant accounting policies and other explanatory information.
13. B is correct. The elements of financial statements related to the measure of performance are income and expenses.
14. A is correct. The elements of financial statements related to the measurement of financial position are assets, liabilities, and equity.
15. A is correct. A discussion of the impact would be the most meaningful, although B would also be useful.

PRACTICE PROBLEMS

1 Expenses on the income statement may be grouped by:
 A nature, but not by function.
 B function, but not by nature.
 C either function or nature.

2 An example of an expense classification by function is:
 A tax expense.
 B interest expense.
 C cost of goods sold.

3 Denali Limited, a manufacturing company, had the following income statement information:

Revenue	$4,000,000
Cost of goods sold	$3,000,000
Other operating expenses	$500,000
Interest expense	$100,000
Tax expense	$120,000

Denali's gross profit is equal to:
 A $280,000.
 B $500,000.
 C $1,000,000.

4 Under IFRS, income includes increases in economic benefits from:
 A increases in liabilities not related to owners' contributions.
 B enhancements of assets not related to owners' contributions.
 C increases in owners' equity related to owners' contributions.

5 Fairplay had the following information related to the sale of its products during 2009, which was its first year of business:

Revenue	$1,000,000
Returns of goods sold	$100,000
Cash collected	$800,000
Cost of goods sold	$700,000

Under the accrual basis of accounting, how much net revenue would be reported on Fairplay's 2009 income statement?
 A $200,000.
 B $900,000.
 C $1,000,000.

6 Apex Consignment sells items over the internet for individuals on a consignment basis. Apex receives the items from the owner, lists them for sale on the internet, and receives a 25 percent commission for any items sold. Apex collects the full amount from the buyer and pays the net amount after commission to the owner. Unsold items are returned to the owner after 90 days. During 2009, Apex had the following information:

- Total sales price of items sold during 2009 on consignment was €2,000,000.
- Total commissions retained by Apex during 2009 for these items was €500,000.

How much revenue should Apex report on its 2009 income statement?

A €500,000.

B €2,000,000.

C €1,500,000.

7 A company previously expensed the incremental costs of obtaining a contract. All else being equal, adopting the May 2014 IASB and FASB converged accounting standards on revenue recognition makes the company's profitability initially appear:

A lower.

B unchanged.

C higher.

8 During 2009, Accent Toys Plc., which began business in October of that year, purchased 10,000 units of a toy at a cost of £10 per unit in October. The toy sold well in October. In anticipation of heavy December sales, Accent purchased 5,000 additional units in November at a cost of £11 per unit. During 2009, Accent sold 12,000 units at a price of £15 per unit. Under the first in, first out (FIFO) method, what is Accent's cost of goods sold for 2009?

A £120,000.

B £122,000.

C £124,000.

9 Using the same information as in Question 8, what would Accent's cost of goods sold be under the weighted average cost method?

A £120,000.

B £122,000.

C £124,000.

10 Which inventory method is least likely to be used under IFRS?

A First in, first out (FIFO).

B Last in, first out (LIFO).

C Weighted average.

11 At the beginning of 2009, Glass Manufacturing purchased a new machine for its assembly line at a cost of $600,000. The machine has an estimated useful life of 10 years and estimated residual value of $50,000. Under the straight-line method, how much depreciation would Glass take in 2010 for financial reporting purposes?

A $55,000.

B $60,000.

C $65,000.

12 Using the same information as in Question 16, how much depreciation would Glass take in 2009 for financial reporting purposes under the double-declining balance method?

A $60,000.

B $110,000.

C $120,000.

13 Which combination of depreciation methods and useful lives is most conservative in the year a depreciable asset is acquired?

A Straight-line depreciation with a short useful life.

B Declining balance depreciation with a long useful life.

C Declining balance depreciation with a short useful life.

14 Under IFRS, a loss from the destruction of property in a fire would most likely be classified as:

A continuing operations.

B discontinued operations.

C other comprehensive income.

15 A company chooses to change an accounting policy. This change requires that, if practical, the company restate its financial statements for:

A all prior periods.

B current and future periods.

C prior periods shown in a report.

16 For 2009, Flamingo Products had net income of $1,000,000. At 1 January 2009, there were 1,000,000 shares outstanding. On 1 July 2009, the company issued 100,000 new shares for $20 per share. The company paid $200,000 in dividends to common shareholders. What is Flamingo's basic earnings per share for 2009?

A $0.80.

B $0.91.

C $0.95.

17 For its fiscal year-end, Calvan Water Corporation (CWC) reported net income of $12 million and a weighted average of 2,000,000 common shares outstanding. The company paid $800,000 in preferred dividends and had 100,000 options outstanding with an average exercise price of $20. CWC's market price over the year averaged $25 per share. CWC's diluted EPS is *closest* to:

A $5.33.

B $5.54.

C $5.94.

18 A company with no debt or convertible securities issued publicly traded common stock three times during the current fiscal year. Under both IFRS and US GAAP, the company's:

A basic EPS equals its diluted EPS.

B capital structure is considered complex at year-end.

C basic EPS is calculated by using a simple average number of shares outstanding.

19 Laurelli Builders (LB) reported the following financial data for year-end 31 December:

Common shares outstanding, 1 January	2,020,000
Common shares issued as stock dividend, 1 June	380,000
Warrants outstanding, 1 January	500,000
Net income	$3,350,000
Preferred stock dividends paid	$430,000
Common stock dividends paid	$240,000

Which statement about the calculation of LB's EPS is *most* accurate?

A LB's basic EPS is $1.12.

B LB's diluted EPS is equal to or less than its basic EPS.

C The weighted average number of shares outstanding is 2,210,000.

20 Cell Services Inc. (CSI) had 1,000,000 average shares outstanding during all of 2009. During 2009, CSI also had 10,000 options outstanding with exercise prices of $10 each. The average stock price of CSI during 2009 was $15. For purposes of computing diluted earnings per share, how many shares would be used in the denominator?

A 1,003,333.

B 1,006,667.

C 1,010,000.

21 For its fiscal year-end, Sublyme Corporation reported net income of $200 million and a weighted average of 50,000,000 common shares outstanding. There are 2,000,000 convertible preferred shares outstanding that paid an annual dividend of $5. Each preferred share is convertible into two shares of the common stock. The diluted EPS is *closest to*:

A $3.52.

B $3.65.

C $3.70.

22 When calculating diluted EPS, which of the following securities in the capital structure increases the weighted average number of common shares outstanding without affecting net income available to common shareholders?

A Stock options

B Convertible debt that is dilutive

C Convertible preferred stock that is dilutive

23 Which statement is *most* accurate? A common size income statement:

A restates each line item of the income statement as a percentage of net income.

B allows an analyst to conduct cross-sectional analysis by removing the effect of company size.

C standardizes each line item of the income statement but fails to help an analyst identify differences in companies' strategies.

24 Selected year-end financial statement data for Workhard are shown below.

	$ millions
Beginning shareholders' equity	475
Ending shareholders' equity	493
Unrealized gain on available-for-sale securities	5
Unrealized loss on derivatives accounted for as hedges	–3
Foreign currency translation gain on consolidation	2
Dividends paid	1
Net income	15

Workhard's comprehensive income for the year:

A is $18 million.

B is increased by the derivatives accounted for as hedges.

C includes $4 million in other comprehensive income.

25 When preparing an income statement, which of the following items would *most likely* be classified as other comprehensive income?

A A foreign currency translation adjustment

B An unrealized gain on a security held for trading purposes

C A realized gain on a derivative contract not accounted for as a hedge

SOLUTIONS

1 C is correct. IAS No. 1 states that expenses may be categorized by either nature or function.

2 C is correct. Cost of goods sold is a classification by function. The other two expenses represent classifications by nature.

3 C is correct. Gross margin is revenue minus cost of goods sold. Answer A represents net income and B represents operating income.

4 B is correct. Under IFRS, income includes increases in economic benefits from increases in assets, enhancement of assets, and decreases in liabilities.

5 B is correct. Net revenue is revenue for goods sold during the period less any returns and allowances, or \$1,000,000 minus \$100,000 = \$900,000.

6 A is correct. Apex is not the owner of the goods and should only report its net commission as revenue.

7 C is correct. Under the converged accounting standards, the incremental costs of obtaining a contract and certain costs incurred to fulfill a contract must be capitalized. If a company expensed these incremental costs in the years prior to adopting the converged standards, all else being equal, its profitability will appear higher under the converged standards.

8 B is correct. Under the first in, first out (FIFO) method, the first 10,000 units sold came from the October purchases at £10, and the next 2,000 units sold came from the November purchases at £11.

9 C is correct. Under the weighted average cost method:

October purchases	10,000 units	\$100,000
November purchases	5,000 units	\$55,000
Total	15,000 units	\$155,000

\$155,000/15,000 units = \$10.3333 × 12,000 units = \$124,000.

10 B is correct. The last in, first out (LIFO) method is not permitted under IFRS. The other two methods are permitted.

11 A is correct. Straight-line depreciation would be (\$600,000 – \$50,000)/10, or \$55,000.

12 C is correct. Double-declining balance depreciation would be \$600,000 × 20 percent (twice the straight-line rate). The residual value is not subtracted from the initial book value to calculate depreciation. However, the book value (carrying amount) of the asset will not be reduced below the estimated residual value.

13 C is correct. This would result in the highest amount of depreciation in the first year and hence the lowest amount of net income relative to the other choices.

14 A is correct. A fire may be infrequent, but it would still be part of continuing operations and reported in the profit and loss statement. Discontinued operations relate to a decision to dispose of an operating division.

15 C is correct. If a company changes an accounting policy, the financial statements for all fiscal years shown in a company's financial report are presented, if practical, as if the newly adopted accounting policy had been used throughout the entire period; this retrospective application of the change makes the

financial results of any prior years included in the report comparable. Notes to the financial statements describe the change and explain the justification for the change.

16 C is correct. The weighted average number of shares outstanding for 2009 is 1,050,000. Basic earnings per share would be $1,000,000 divided by 1,050,000, or $0.95.

17 B is correct. The formula to calculate diluted EPS is as follows:

Diluted EPS = (Net income – Preferred dividends)/[Weighted average number of shares outstanding + (New shares that would have been issued at option exercise – Shares that could have been purchased with cash received upon exercise) × (Proportion of year during which the financial instruments were outstanding)].

The underlying assumption is that outstanding options are exercised, and then the proceeds from the issuance of new shares are used to repurchase shares already outstanding:

Proceeds from option exercise = 100,000 × $20 = $2,000,000

Shares repurchased = $2,000,000/$25 = 80,000

The net increase in shares outstanding is thus 100,000 – 80,000 = 20,000. Therefore, the diluted EPS for CWC = ($12,000,000 – $800,000)/2,020,000 = $5.54.

18 A is correct. Basic and diluted EPS are equal for a company with a simple capital structure. A company that issues only common stock, with no financial instruments that are potentially convertible into common stock has a simple capital structure. Basic EPS is calculated using the weighted average number of shares outstanding.

19 B is correct. LB has warrants in its capital structure; if the exercise price is less than the weighted average market price during the year, the effect of their conversion is to increase the weighted average number of common shares outstanding, causing diluted EPS to be lower than basic EPS. If the exercise price is equal to the weighted average market price, the number of shares issued equals the number of shares repurchased. Therefore, the weighted average number of common shares outstanding is not affected and diluted EPS equals basic EPS. If the exercise price is greater than the weighted average market price, the effect of their conversion is anti-dilutive. As such, they are not included in the calculation of basic EPS. LB's basic EPS is $1.22 [= ($3,350,000 – $430,000)/2,400,000]. Stock dividends are treated as having been issued retroactively to the beginning of the period.

20 A is correct. With stock options, the treasury stock method must be used. Under that method, the company would receive $100,000 (10,000 × $10) and would repurchase 6,667 shares ($100,000/$15). The shares for the denominator would be:

Shares outstanding	1,000,000
Options exercises	10,000
Treasury shares purchased	(6,667)
Denominator	1,003,333

21 C is correct.

Diluted EPS = (Net income)/(Weighted average number of shares outstanding + New common shares that would have been issued at conversion)
= $200,000,000/[50,000,000 + (2,000,000 × 2)]
= $3.70

The diluted EPS assumes that the preferred dividend is not paid and that the shares are converted at the beginning of the period.

22 A is correct. When a company has stock options outstanding, diluted EPS is calculated as if the financial instruments had been exercised and the company had used the proceeds from the exercise to repurchase as many shares possible at the weighted average market price of common stock during the period. As a result, the conversion of stock options increases the number of common shares outstanding but has no effect on net income available to common shareholders. The conversion of convertible debt increases the net income available to common shareholders by the after-tax amount of interest expense saved. The conversion of convertible preferred shares increases the net income available to common shareholders by the amount of preferred dividends paid; the numerator becomes the net income.

23 B is correct. Common size income statements facilitate comparison across time periods (time-series analysis) and across companies (cross-sectional analysis) by stating each line item of the income statement as a percentage of revenue. The relative performance of different companies can be more easily assessed because scaling the numbers removes the effect of size. A common size income statement states each line item on the income statement as a percentage of revenue. The standardization of each line item makes a common size income statement useful for identifying differences in companies' strategies.

24 C is correct. Comprehensive income includes both net income and other comprehensive income.

Other comprehensive income = Unrealized gain on available-for-sale securities – Unrealized loss on derivatives accounted for as hedges + Foreign currency translation gain on consolidation
= $5 million – $3 million + $2 million
= $4 million

Alternatively,

Comprehensive income – Net income = Other comprehensive income

Comprehensive income = (Ending shareholders equity – Beginning shareholders equity) + Dividends
= ($493 million – $475 million) + $1 million
= $18 million + $1 million = $19 million

Net income is $15 million so other comprehensive income is $4 million.

25 A is correct. Other comprehensive income includes items that affect shareholders' equity but are not reflected in the company's income statement. In consolidating the financial statements of foreign subsidiaries, the effects of translating the subsidiaries' balance sheet assets and liabilities at current exchange rates are included as other comprehensive income.

PRACTICE PROBLEMS

1 Resources controlled by a company as a result of past events are:
  A equity.
  B assets.
  C liabilities.

2 Equity equals:
  A Assets – Liabilities.
  B Liabilities – Assets.
  C Assets + Liabilities.

3 Distinguishing between current and non-current items on the balance sheet and presenting a subtotal for current assets and liabilities is referred to as:
  A a classified balance sheet.
  B an unclassified balance sheet.
  C a liquidity-based balance sheet.

4 Shareholders' equity reported on the balance sheet is *most likely* to differ from the market value of shareholders' equity because:
  A historical cost basis is used for all assets and liabilities.
  B some factors that affect the generation of future cash flows are excluded.
  C shareholders' equity reported on the balance sheet is updated continuously.

5 The information provided by a balance sheet item is limited because of uncertainty regarding:
  A measurement of its cost or value with reliability.
  B the change in current value following the end of the reporting period.
  C the probability that any future economic benefit will flow to or from the entity.

6 Which of the following is *most likely* classified as a current liability?
  A Payment received for a product due to be delivered at least one year after the balance sheet date
  B Payments for merchandise due at least one year after the balance sheet date but still within a normal operating cycle
  C Payment on debt due in six months for which the company has the unconditional right to defer settlement for at least one year after the balance sheet date

7 The *most likely* company to use a liquidity-based balance sheet presentation is a:
  A bank.
  B computer manufacturer holding inventories.
  C software company with trade receivables and payables.

8 All of the following are current assets *except*:
  A cash.
  B goodwill.
  C inventories.

9 The *most* likely costs included in both the cost of inventory and property, plant, and equipment are:

- **A** selling costs.
- **B** storage costs.
- **C** delivery costs.

10 Debt due within one year is considered:

- **A** current.
- **B** preferred.
- **C** convertible.

11 Money received from customers for products to be delivered in the future is recorded as:

- **A** revenue and an asset.
- **B** an asset and a liability.
- **C** revenue and a liability.

12 An example of a contra asset account is:

- **A** depreciation expense.
- **B** sales returns and allowances.
- **C** allowance for doubtful accounts.

13 The carrying value of inventories reflects:

- **A** their historical cost.
- **B** their current value.
- **C** the lower of historical cost or net realizable value.

14 When a company pays its rent in advance, its balance sheet will reflect a reduction in:

- **A** assets and liabilities.
- **B** assets and shareholders' equity.
- **C** one category of assets and an increase in another.

15 Accrued expenses (accrued liabilities) are:

- **A** expenses that have been paid.
- **B** created when another liability is reduced.
- **C** expenses that have been reported on the income statement but not yet paid.

16 The initial measurement of goodwill is *most likely* affected by:

- **A** an acquisition's purchase price.
- **B** the acquired company's book value.
- **C** the fair value of the acquirer's assets and liabilities.

17 Defining total asset turnover as revenue divided by average total assets, all else equal, impairment write-downs of long-lived assets owned by a company will *most likely* result in an increase for that company in:

- **A** the debt-to-equity ratio but not the total asset turnover.
- **B** the total asset turnover but not the debt-to-equity ratio.
- **C** both the debt-to-equity ratio and the total asset turnover.

18 A company has total liabilities of £35 million and total stockholders' equity of £55 million. Total liabilities are represented on a vertical common-size balance sheet by a percentage *closest* to:

- **A** 35%.

B 39%.

C 64%.

19 For financial assets classified as trading securities, how are unrealized gains and losses reflected in shareholders' equity?

A They are not recognized.

B They flow through income into retained earnings.

C They are a component of accumulated other comprehensive income.

20 For financial assets classified as available for sale, how are unrealized gains and losses reflected in shareholders' equity?

A They are not recognized.

B They flow through retained earnings.

C They are a component of accumulated other comprehensive income.

21 For financial assets classified as held to maturity, how are unrealized gains and losses reflected in shareholders' equity?

A They are not recognized.

B They flow through retained earnings.

C They are a component of accumulated other comprehensive income.

22 The non-controlling (minority) interest in consolidated subsidiaries is presented on the balance sheet:

A as a long-term liability.

B separately, but as a part of shareholders' equity.

C as a mezzanine item between liabilities and shareholders' equity.

23 The item "retained earnings" is a component of:

A assets.

B liabilities.

C shareholders' equity.

24 When a company buys shares of its own stock to be held in treasury, it records a reduction in:

A both assets and liabilities.

B both assets and shareholders' equity.

C assets and an increase in shareholders' equity.

25 Which of the following would an analyst *most likely* be able to determine from a common-size analysis of a company's balance sheet over several periods?

A An increase or decrease in sales.

B An increase or decrease in financial leverage.

C A more efficient or less efficient use of assets.

26 An investor concerned whether a company can meet its near-term obligations is *most likely* to calculate the:

A current ratio.

B return on total capital.

C financial leverage ratio.

27 The most stringent test of a company's liquidity is its:

A cash ratio.

B quick ratio.

C current ratio.

28 An investor worried about a company's long-term solvency would *most likely* examine its:

A current ratio.

B return on equity.

C debt-to-equity ratio.

29 Using the information presented in Exhibit 4, the quick ratio for SAP Group at 31 December 2017 is *closest* to:

A 1.00.

B 1.07.

C 1.17.

30 Using the information presented in Exhibit 14, the financial leverage ratio for SAP Group at 31 December 2017 is *closest* to:

A 1.50.

B 1.66.

C 2.00.

Questions 31 through 34 refer to Exhibit 1.

Exhibit 1 Common-Size Balance Sheets for Company A, Company B, and Sector Average

	Company A	Company B	Sector Average
ASSETS			
Current assets			
Cash and cash equivalents	5	5	7
Marketable securities	5	0	2
Accounts receivable, net	5	15	12
Inventories	15	20	16
Prepaid expenses	5	15	11
Total current assets	35	55	48
Property, plant, and equipment, net	40	35	37
Goodwill	25	0	8
Other assets	0	10	7
Total assets	100	100	100
LIABILITIES AND SHAREHOLDERS' EQUITY			
Current liabilities			
Accounts payable	10	10	10
Short-term debt	25	10	15
Accrued expenses	0	5	3
Total current liabilities	35	25	28

(continued)

Exhibit 1 (Continued)

LIABILITIES AND SHAREHOLDERS' EQUITY			
Long-term debt	45	20	28
Other non-current liabilities	0	10	7
Total liabilities	80	55	63
Total shareholders' equity	20	45	37
Total liabilities and shareholders' equity	100	100	100

31 Based on Exhibit 1, which statement is *most likely* correct?

A Company A has below-average liquidity risk.

B Company B has above-average solvency risk.

C Company A has made one or more acquisitions.

32 The quick ratio for Company A is *closest* to:

A 0.43.

B 0.57.

C 1.00.

33 Based on Exhibit 1, the financial leverage ratio for Company B is *closest* to:

A 0.55.

B 1.22.

C 2.22.

34 Based on Exhibit 1, which ratio indicates lower liquidity risk for Company A compared with Company B?

A Cash ratio

B Quick ratio

C Current ratio

SOLUTIONS

1 B is correct. Assets are resources controlled by a company as a result of past events.

2 A is correct. Assets = Liabilities + Equity and, therefore, Assets – Liabilities = Equity.

3 A is correct. A classified balance sheet is one that classifies assets and liabilities as current or non-current and provides a subtotal for current assets and current liabilities. A liquidity-based balance sheet broadly presents assets and liabilities in order of liquidity.

4 B is correct. The balance sheet omits important aspects of a company's ability to generate future cash flows, such as its reputation and management skills. The balance sheet measures some assets and liabilities based on historical cost and measures others based on current value. Market value of shareholders' equity is updated continuously. Shareholders' equity reported on the balance sheet is updated for reporting purposes and represents the value that was current at the end of the reporting period.

5 B is correct. Balance sheet information is as of a specific point in time, and items measured at current value reflect the value that was current at the end of the reporting period. For all financial statement items, an item should be recognized in the financial statements only if it is probable that any future economic benefit associated with the item will flow to or from the entity and if the item has a cost or value that can be measured with reliability.

6 B is correct. Payments due within one operating cycle of the business, even if they will be settled more than one year after the balance sheet date, are classified as current liabilities. Payment received in advance of the delivery of a good or service creates an obligation or liability. If the obligation is to be fulfilled at least one year after the balance sheet date, it is recorded as a non-current liability, such as deferred revenue or deferred income. Payments that the company has the unconditional right to defer for at least one year after the balance sheet may be classified as non-current liabilities.

7 A is correct. A liquidity-based presentation, rather than a current/non-current presentation, may be used by such entities as banks if broadly presenting assets and liabilities in order of liquidity is reliable and more relevant.

8 B is correct. Goodwill is a long-term asset, and the others are all current assets.

9 C is correct. Both the cost of inventory and property, plant, and equipment include delivery costs, or costs incurred in bringing them to the location for use or resale.

10 A is correct. Current liabilities are those liabilities, including debt, due within one year. Preferred refers to a class of stock. Convertible refers to a feature of bonds (or preferred stock) allowing the holder to convert the instrument into common stock.

11 B is correct. The cash received from customers represents an asset. The obligation to provide a product in the future is a liability called "unearned income" or "unearned revenue." As the product is delivered, revenue will be recognized and the liability will be reduced.

12 C is correct. A contra asset account is netted against (i.e., reduces) the balance of an asset account. The allowance for doubtful accounts reduces the balance of accounts receivable. Accumulated depreciation, not depreciation expense, is a contra asset account. Sales returns and allowances create a contra account that reduce sales, not an asset.

13 C is correct. Under IFRS, inventories are carried at historical cost, unless net realizable value of the inventory is less. Under US GAAP, inventories are carried at the lower of cost or market.

14 C is correct. Paying rent in advance will reduce cash and increase prepaid expenses, both of which are assets.

15 C is correct. Accrued liabilities are expenses that have been reported on a company's income statement but have not yet been paid.

16 A is correct. Initially, goodwill is measured as the difference between the purchase price paid for an acquisition and the fair value of the acquired, not acquiring, company's net assets (identifiable assets less liabilities).

17 C is correct. Impairment write-downs reduce equity in the denominator of the debt-to-equity ratio but do not affect debt, so the debt-to-equity ratio is expected to increase. Impairment write-downs reduce total assets but do not affect revenue. Thus, total asset turnover is expected to increase.

18 B is correct. Vertical common-size analysis involves stating each balance sheet item as a percentage of total assets. Total assets are the sum of total liabilities (£35 million) and total stockholders' equity (£55 million), or £90 million. Total liabilities are shown on a vertical common-size balance sheet as (£35 million/£90 million) ≈ 39%.

19 B is correct. For financial assets classified as trading securities, unrealized gains and losses are reported on the income statement and flow to shareholders' equity as part of retained earnings.

20 C is correct. For financial assets classified as available for sale, unrealized gains and losses are not recorded on the income statement and instead are part of *other* comprehensive income. Accumulated other comprehensive income is a component of Shareholders' equity

21 A is correct. Financial assets classified as held to maturity are measured at amortised cost. Gains and losses are recognized only when realized.

22 B is correct. The non-controlling interest in consolidated subsidiaries is shown separately as part of shareholders' equity.

23 C is correct. The item "retained earnings" is a component of shareholders' equity.

24 B is correct. Share repurchases reduce the company's cash (an asset). Shareholders' equity is reduced because there are fewer shares outstanding and treasury stock is an offset to owners' equity.

25 B is correct. Common-size analysis (as presented in the reading) provides information about composition of the balance sheet and changes over time. As a result, it can provide information about an increase or decrease in a company's financial leverage.

26 A is correct. The current ratio provides a comparison of assets that can be turned into cash relatively quickly and liabilities that must be paid within one year. The other ratios are more suited to longer-term concerns.

27 A is correct. The cash ratio determines how much of a company's near-term obligations can be settled with existing amounts of cash and marketable securities.

28 C is correct. The debt-to-equity ratio, a solvency ratio, is an indicator of financial risk.

29 B is correct. The quick ratio ([Cash + Marketable securities + Receivables] ÷ Current liabilities) is 1.07 ([= €4,011 + €990 + €5,899] ÷ €10,210). As noted in the text, the largest component of the current financial assets are loans and other financial receivables. Thus, financial assets are included in the quick ratio but not the cash ratio.

30 B is correct. The financial leverage ratio (Total assets ÷ Total equity) is 1.66 (= €42,497 ÷ €25,540).

31 C is correct. The presence of goodwill on Company A's balance sheet signifies that it has made one or more acquisitions in the past. The current, cash, and quick ratios are lower for Company A than for the sector average. These lower liquidity ratios imply above-average liquidity risk. The total debt, long-term debt-to-equity, debt-to-equity, and financial leverage ratios are lower for Company B than for the sector average. These lower solvency ratios imply below-average solvency risk.

Current ratio is (35/35) = 1.00 for Company A, versus (48/28) = 1.71 for the sector average.

Cash ratio is (5 + 5)/35 = 0.29 for Company A, versus (7 + 2)/28 = 0.32 for the sector average.

Quick ratio is (5 + 5 + 5)/35 = 0.43 for Company A, versus (7 + 2 + 12)/28 = 0.75 for the sector average.

Total debt ratio is (55/100) = 0.55 for Company B, versus (63/100) = 0.63 for the sector average.

Long-term debt-to-equity ratio is (20/45) = 0.44 for Company B, versus (28/37) = 0.76 for the sector average.

Debt-to-equity ratio is (55/45) = 1.22 for Company B, versus (63/37) = 1.70 for the sector average.

Financial leverage ratio is (100/45) = 2.22 for Company B, versus (100/37) = 2.70 for the sector average.

32 A is correct. The quick ratio is defined as (Cash and cash equivalents + Marketable securities + receivables) ÷ Current liabilities. For Company A, this calculation is (5 + 5 + 5)/35 = 0.43.

33 C is correct. The financial leverage ratio is defined as Total assets ÷ Total equity. For Company B, total assets are 100 and total equity is 45; hence, the financial leverage ratio is 100/45 = 2.22.

34 A is correct. The cash ratio is defined as (Cash + Marketable securities)/Current liabilities. Company A's cash ratio, (5 + 5)/35 = 0.29, is higher than (5 + 0)/25 = 0.20 for Company B.

PRACTICE PROBLEMS

1 The three major classifications of activities in a cash flow statement are:
   - A inflows, outflows, and net flows.
   - B operating, investing, and financing.
   - C revenues, expenses, and net income.

2 The sale of a building for cash would be classified as what type of activity on the cash flow statement?
   - A Operating.
   - B Investing.
   - C Financing.

3 Under which section of a manufacturing company's cash flow statement are the following activities reported?

   Item 1: Purchases of securities held for trading

   Item 2: Sales of securities considered cash equivalents
   - A Both items are investing activities.
   - B Both items are operating activities.
   - C Only Item 1 is an investing activity.

4 Which of the following is an example of a financing activity on the cash flow statement under US GAAP?
   - A Payment of interest.
   - B Receipt of dividends.
   - C Payment of dividends.

5 A conversion of a face value \$1 million convertible bond for \$1 million of common stock would most likely be:
   - A reported as a \$1 million investing cash inflow and outflow.
   - B reported as a \$1 million financing cash outflow and inflow.
   - C reported as supplementary information to the cash flow statement.

6 A company recently engaged in a non-cash transaction that significantly affected its property, plant, and equipment. The transaction is:
   - A reported under the investing section of the cash flow statement.
   - B reported differently in cash flow from operations under the direct and indirect methods.
   - C disclosed as a separate note or in a supplementary schedule to the cash flow statement.

7 Interest paid is classified as an operating cash flow under:
   - A US GAAP but may be classified as either operating or investing cash flows under IFRS.
   - B IFRS but may be classified as either operating or investing cash flows under US GAAP.
   - C US GAAP but may be classified as either operating or financing cash flows under IFRS.

8 Cash flows from taxes on income must be separately disclosed under:

A IFRS only.

B US GAAP only.

C both IFRS and US GAAP.

9 Which of the following components of the cash flow statement may be prepared under the indirect method under both IFRS and US GAAP?

A Operating.

B Investing.

C Financing.

10 Which of the following is *most likely* to appear in the operating section of a cash flow statement under the indirect method?

A Net income.

B Cash paid to suppliers.

C Cash received from customers.

11 A benefit of using the direct method rather than the indirect method when reporting operating cash flows is that the direct method:

A mirrors a forecasting approach.

B is easier and less costly.

C provides specific information on the sources of operating cash flows.

12 Mabel Corporation (MC) reported accounts receivable of $66 million at the end of its second fiscal quarter. MC had revenues of $72 million for its third fiscal quarter and reported accounts receivable of $55 million at the end of its third fiscal quarter. Based on this information, the amount of cash MC collected from customers during the third fiscal quarter is:

A $61 million.

B $72 million.

C $83 million.

13 When computing net cash flow from operating activities using the indirect method, an addition to net income is *most likely* to occur when there is a:

A gain on the sale of an asset.

B loss on the retirement of debt.

C decrease in a deferred tax liability.

14 Red Road Company, a consulting company, reported total revenues of $100 million, total expenses of $80 million, and net income of $20 million in the most recent year. If accounts receivable increased by $10 million, how much cash did the company receive from customers?

A $90 million.

B $100 million.

C $110 million.

15 In 2018, a company using US GAAP made cash payments of $6 million for salaries, $2 million for interest expense, and $4 million for income taxes. Additional information for the company is provided in the table:

($ millions)	2017	2018
Revenue	42	37
Cost of goods sold	18	16
Inventory	36	40

(continued)

($ millions)	2017	2018
Accounts receivable	22	19
Accounts payable	14	12

Based only on the information given, the company's operating cash flow for 2018 is *closest to*:

A $6 million.

B $10 million.

C $14 million.

16 Green Glory Corp., a garden supply wholesaler, reported cost of goods sold for the year of $80 million. Total assets increased by $55 million, including an increase of $5 million in inventory. Total liabilities increased by $45 million, including an increase of $2 million in accounts payable. The cash paid by the company to its suppliers is most likely *closest* to:

A $73 million.

B $77 million.

C $83 million.

17 Purple Fleur S.A., a retailer of floral products, reported cost of goods sold for the year of $75 million. Total assets increased by $55 million, but inventory declined by $6 million. Total liabilities increased by $45 million, and accounts payable increased by $2 million. The cash paid by the company to its suppliers is most likely *closest* to:

A $67 million.

B $79 million.

C $83 million.

18 White Flag, a women's clothing manufacturer, reported salaries expense of $20 million. The beginning balance of salaries payable was $3 million, and the ending balance of salaries payable was $1 million. How much cash did the company pay in salaries?

A $18 million.

B $21 million.

C $22 million.

19 An analyst gathered the following information from a company's 2018 financial statements (in $ millions):

Year ended 31 December	2017	2018
Net sales	245.8	254.6
Cost of goods sold	168.3	175.9
Accounts receivable	73.2	68.3
Inventory	39.0	47.8
Accounts payable	20.3	22.9

Based only on the information above, the company's 2018 statement of cash flows in the direct format would include amounts (in $ millions) for cash received from customers and cash paid to suppliers, respectively, that are *closest* to:

	cash received from customers	cash paid to suppliers
A	249.7	169.7
B	259.5	174.5
C	259.5	182.1

20 Golden Cumulus Corp., a commodities trading company, reported interest expense of $19 million and taxes of $6 million. Interest payable increased by $3 million, and taxes payable decreased by $4 million over the period. How much cash did the company pay for interest and taxes?

A $22 million for interest and $10 million for taxes.

B $16 million for interest and $2 million for taxes.

C $16 million for interest and $10 million for taxes.

21 An analyst gathered the following information from a company's 2018 financial statements (in $ millions):

Balances as of Year Ended 31 December	2017	2018
Retained earnings	120	145
Accounts receivable	38	43
Inventory	45	48
Accounts payable	36	29

In 2018, the company declared and paid cash dividends of $10 million and recorded depreciation expense in the amount of $25 million. The company considers dividends paid a financing activity. The company's 2018 cash flow from operations (in $ millions) was *closest* to

A 25.

B 45.

C 75.

22 Silverago Incorporated, an international metals company, reported a loss on the sale of equipment of $2 million in 2018. In addition, the company's income statement shows depreciation expense of $8 million and the cash flow statement shows capital expenditure of $10 million, all of which was for the purchase of new equipment. Using the following information from the comparative balance sheets, how much cash did the company receive from the equipment sale?

Balance Sheet Item	12/31/2017	12/31/2018	Change
Equipment	$100 million	$105 million	$5 million
Accumulated depreciation—equipment	$40 million	$46 million	$6 million

A $1 million.

B $2 million.

C $3 million.

23 Jaderong Plinkett Stores reported net income of $25 million. The company has no outstanding debt. Using the following information from the comparative balance sheets (in millions), what should the company report in the financing section of the statement of cash flows in 2018?

Balance Sheet Item	12/31/2017	12/31/2018	Change
Common stock	$100	$102	$2
Additional paid-in capital common stock	$100	$140	$40
Retained earnings	$100	$115	$15
Total stockholders' equity	$300	$357	$57

- **A** Issuance of common stock of $42 million; dividends paid of $10 million.
- **B** Issuance of common stock of $38 million; dividends paid of $10 million.
- **C** Issuance of common stock of $42 million; dividends paid of $40 million.

24 Based on the following information for Star Inc., what are the total net adjustments that the company would make to net income in order to derive operating cash flow?

Income Statement Item	Year Ended 12/31/2018
Net income	$20 million
Depreciation	$2 million

Balance Sheet Item	12/31/2017	12/31/2018	Change
Accounts receivable	$25 million	$22 million	($3 million)
Inventory	$10 million	$14 million	$4 million
Accounts payable	$8 million	$13 million	$5 million

- **A** Add $2 million.
- **B** Add $6 million.
- **C** Subtract $6 million.

25 The first step in cash flow statement analysis should be to:

- **A** evaluate consistency of cash flows.
- **B** determine operating cash flow drivers.
- **C** identify the major sources and uses of cash.

26 Which of the following would be valid conclusions from an analysis of the cash flow statement for Telefónica Group presented in Exhibit 3?

- **A** The primary use of cash is financing activities.
- **B** The primary source of cash is operating activities.
- **C** Telefónica classifies dividends paid as an operating activity.

27 The following information is extracted from Sweetfall Incorporated's financial statements.

Income Statement		Balance Sheet Changes	
Revenue	$56,800	Decrease in accounts receivable	$1,324
Cost of goods sold	27,264	Decrease in inventory	501
Other operating expense	562	Increase in prepaid expense	6
Depreciation expense	2,500	Increase in accounts payable	1,063

The amount of cash Sweetfall Inc. paid to suppliers is:

- **A** $25,700.
- **B** $26,702.
- **C** $27,826.

28 Which is an appropriate method of preparing a common-size cash flow statement?

- **A** Show each item of revenue and expense as a percentage of net revenue.
- **B** Show each line item on the cash flow statement as a percentage of net revenue.
- **C** Show each line item on the cash flow statement as a percentage of total cash outflows.

29 Which of the following is an appropriate method of computing free cash flow to the firm?

- **A** Add operating cash flows to capital expenditures and deduct after-tax interest payments.
- **B** Add operating cash flows to after-tax interest payments and deduct capital expenditures.
- **C** Deduct both after-tax interest payments and capital expenditures from operating cash flows.

30 An analyst has calculated a ratio using as the numerator the sum of operating cash flow, interest, and taxes and as the denominator the amount of interest. What is this ratio, what does it measure, and what does it indicate?

- **A** This ratio is an interest coverage ratio, measuring a company's ability to meet its interest obligations and indicating a company's solvency.
- **B** This ratio is an effective tax ratio, measuring the amount of a company's operating cash flow used for taxes and indicating a company's efficiency in tax management.
- **C** This ratio is an operating profitability ratio, measuring the operating cash flow generated accounting for taxes and interest and indicating a company's liquidity.

SOLUTIONS

1 B is correct. Operating, investing, and financing are the three major classifications of activities in a cash flow statement. Revenues, expenses, and net income are elements of the income statement. Inflows, outflows, and net flows are items of information in the statement of cash flows.

2 B is correct. Purchases and sales of long-term assets are considered investing activities. Note that if the transaction had involved the exchange of a building for other than cash (for example, for another building, common stock of another company, or a long-term note receivable), it would have been considered a significant non-cash activity.

3 B is correct. The purchase and sale of securities considered cash equivalents and securities held for trading are considered operating activities even for companies in which this activity is not a primary business activity.

4 C is correct. Payment of dividends is a financing activity under US GAAP. Payment of interest and receipt of dividends are included in operating cash flows under US GAAP. Note that IFRS allow companies to include receipt of interest and dividends as either operating or investing cash flows and to include payment of interest and dividends as either operating or financing cash flows.

5 C is correct. Non-cash transactions, if significant, are reported as supplementary information, not in the investing or financing sections of the cash flow statement.

6 C is correct. Because no cash is involved in non-cash transactions, these transactions are not incorporated in the cash flow statement. However, non-cash transactions that significantly affect capital or asset structures are required to be disclosed either in a separate note or a supplementary schedule to the cash flow statement.

7 C is correct. Interest expense is always classified as an operating cash flow under US GAAP but may be classified as either an operating or financing cash flow under IFRS.

8 C is correct. Taxes on income are required to be separately disclosed under IFRS and US GAAP. The disclosure may be in the cash flow statement or elsewhere.

9 A is correct. The operating section may be prepared under the indirect method. The other sections are always prepared under the direct method.

10 A is correct. Under the indirect method, the operating section would begin with net income and adjust it to arrive at operating cash flow. The other two items would appear in the operating section under the direct method.

11 C is correct. The primary argument in favor of the direct method is that it provides information on the specific sources of operating cash receipts and payments. Arguments for the indirect method include that it mirrors a forecasting approach and it is easier and less costly

12 C is correct. The amount of cash collected from customers during the quarter is equal to beginning accounts receivable plus revenues minus ending accounts receivable: \$66 million + \$72 million – \$55 million = \$83 million. A reduction in accounts receivable indicates that cash collected during the quarter was greater than revenue on an accrual basis.

13 B is correct. An addition to net income is made when there is a loss on the retirement of debt, which is a non-operating loss. A gain on the sale of an asset and a decrease in deferred tax liability are both subtracted from net-income.

14 A is correct. Revenues of $100 million minus the increase in accounts receivable of $10 million equal $90 million cash received from customers. The increase in accounts receivable means that the company received less in cash than it reported as revenue.

15 A is correct.

Operating cash flows = Cash received from customers – (Cash paid to suppliers + Cash paid to employees + Cash paid for other operating expenses + Cash paid for interest + Cash paid for income taxes)

Cash received from customers = Revenue + Decrease in accounts receivable
= $37 + $3 = $40 million

Cash paid to suppliers = Cost of goods sold + Increase in inventory + Decrease in accounts payable
= $16 + $4 + $2 = $22 million

Therefore, the company's operating cash flow = $40 – $22 – Cash paid for salaries – Cash paid for interest – Cash paid for taxes = $40 – $22 – $6 – $2 – $4 = $6 million.

16 C is correct. Cost of goods sold of $80 million plus the increase in inventory of $5 million equals purchases from suppliers of $85 million. The increase in accounts payable of $2 million means that the company paid $83 million in cash ($85 million minus $2 million) to its suppliers.

17 A is correct. Cost of goods sold of $75 million less the decrease in inventory of $6 million equals purchases from suppliers of $69 million. The increase in accounts payable of $2 million means that the company paid $67 million in cash ($69 million minus $2 million).

18 C is correct. Beginning salaries payable of $3 million plus salaries expense of $20 million minus ending salaries payable of $1 million equals $22 million. Alternatively, the expense of $20 million plus the $2 million decrease in salaries payable equals $22 million.

19 C is correct. Cash received from customers = Sales + Decrease in accounts receivable = 254.6 + 4.9 = 259.5. Cash paid to suppliers = Cost of goods sold + Increase in inventory – Increase in accounts payable = 175.9 + 8.8 – 2.6 = 182.1.

20 C is correct. Interest expense of $19 million less the increase in interest payable of $3 million equals interest paid of $16 million. Tax expense of $6 million plus the decrease in taxes payable of $4 million equals taxes paid of $10 million.

21 B is correct. All dollar amounts are in millions. Net income (NI) for 2018 is $35. This amount is the increase in retained earnings, $25, plus the dividends paid, $10. Depreciation of $25 is added back to net income, and the increases in accounts receivable, $5, and in inventory, $3, are subtracted from net income because they are uses of cash. The decrease in accounts payable is also a use of cash and, therefore, a subtraction from net income. Thus, cash flow from operations is $25 + $10 + $25 – $5 – $3 – $7 = $45.

22 A is correct. Selling price (cash inflow) minus book value equals gain or loss on sale; therefore, gain or loss on sale plus book value equals selling price (cash inflow). The amount of loss is given—$2 million. To calculate the book value of the equipment sold, find the historical cost of the equipment and the accumulated depreciation on the equipment.

- Beginning balance of equipment of $100 million plus equipment purchased of $10 million minus ending balance of equipment of $105 million equals the historical cost of equipment sold, or $5 million.
- Beginning accumulated depreciation of $40 million plus depreciation expense for the year of $8 million minus ending balance of accumulated depreciation of $46 million equals accumulated depreciation on the equipment sold, or $2 million.
- Therefore, the book value of the equipment sold was $5 million minus $2 million, or $3 million.
- Because the loss on the sale of equipment was $2 million, the amount of cash received must have been $1 million.

23 A is correct. The increase of $42 million in common stock and additional paid-in capital indicates that the company issued stock during the year. The increase in retained earnings of $15 million indicates that the company paid $10 million in cash dividends during the year, determined as beginning retained earnings of $100 million plus net income of $25 million minus ending retained earnings of $115 million, which equals $10 million in cash dividends.

24 B is correct. To derive operating cash flow, the company would make the following adjustments to net income: Add depreciation (a non-cash expense) of $2 million; add the decrease in accounts receivable of $3 million; add the increase in accounts payable of $5 million; and subtract the increase in inventory of $4 million. Total additions would be $10 million, and total subtractions would be $4 million, which gives net additions of $6 million.

25 C is correct. An overall assessment of the major sources and uses of cash should be the first step in evaluating a cash flow statement.

26 B is correct. The primary source of cash is operating activities. Cash flow provided by operating activity totaled €13,796 million in the most recent year. The primary use of cash is investing activities (total of €10,245 million). Dividends paid are classified as a financing activity.

27 A is correct. The amount of cash paid to suppliers is calculated as follows:

= Cost of goods sold – Decrease in inventory – Increase in accounts payable
= $27,264 – $501 – $1,063
= $25,700.

28 B is correct. An appropriate method to prepare a common-size cash flow statement is to show each line item on the cash flow statement as a percentage of net revenue. An alternative way to prepare a statement of cash flows is to show each item of cash inflow as a percentage of total inflows and each item of cash outflows as a percentage of total outflows.

29 B is correct. Free cash flow to the firm can be computed as operating cash flows plus after-tax interest expense less capital expenditures.

30 A is correct. This ratio is an interest coverage ratio, measuring a company's ability to meet its interest obligations and indicating a company's solvency. This coverage ratio is based on cash flow information; another common coverage ratio uses a measure based on the income statement (earnings before interest, taxes, depreciation, and amortisation).

PRACTICE PROBLEMS

1 Comparison of a company's financial results to other peer companies for the same time period is called:

A technical analysis.

B time-series analysis.

C cross-sectional analysis.

2 In order to assess a company's ability to fulfill its long-term obligations, an analyst would *most likely* examine:

A activity ratios.

B liquidity ratios.

C solvency ratios.

3 Which ratio would a company *most likely* use to measure its ability to meet short-term obligations?

A Current ratio.

B Payables turnover.

C Gross profit margin.

4 Which of the following ratios would be *most* useful in determining a company's ability to cover its lease and interest payments?

A ROA.

B Total asset turnover.

C Fixed charge coverage.

5 An analyst is interested in assessing both the efficiency and liquidity of Spherion PLC. The analyst has collected the following data for Spherion:

	FY3	FY2	FY1
Days of inventory on hand	32	34	40
Days sales outstanding	28	25	23
Number of days of payables	40	35	35

Based on this data, what is the analyst *least likely* to conclude?

A Inventory management has contributed to improved liquidity.

B Management of payables has contributed to improved liquidity.

C Management of receivables has contributed to improved liquidity.

6 An analyst is evaluating the solvency and liquidity of Apex Manufacturing and has collected the following data (in millions of euro):

	FY5 (€)	FY4 (€)	FY3 (€)
Total debt	2,000	1,900	1,750
Total equity	4,000	4,500	5,000

Which of the following would be the analyst's *most likely* conclusion?

A The company is becoming increasingly less solvent, as evidenced by the increase in its debt-to-equity ratio from 0.35 to 0.50 from FY3 to FY5.

B The company is becoming less liquid, as evidenced by the increase in its debt-to-equity ratio from 0.35 to 0.50 from FY3 to FY5.

C The company is becoming increasingly more liquid, as evidenced by the increase in its debt-to-equity ratio from 0.35 to 0.50 from FY3 to FY5.

7 With regard to the data in Problem 6, what would be the *most* reasonable explanation of the financial data?

A The decline in the company's equity results from a decline in the market value of this company's common shares.

B The €250 increase in the company's debt from FY3 to FY5 indicates that lenders are viewing the company as increasingly creditworthy.

C The decline in the company's equity indicates that the company may be incurring losses, paying dividends greater than income, and/or repurchasing shares.

8 An analyst observes a decrease in a company's inventory turnover. Which of the following would *most likely* explain this trend?

A The company installed a new inventory management system, allowing more efficient inventory management.

B Due to problems with obsolescent inventory last year, the company wrote off a large amount of its inventory at the beginning of the period.

C The company installed a new inventory management system but experienced some operational difficulties resulting in duplicate orders being placed with suppliers.

9 Which of the following would *best* explain an increase in receivables turnover?

A The company adopted new credit policies last year and began offering credit to customers with weak credit histories.

B Due to problems with an error in its old credit scoring system, the company had accumulated a substantial amount of uncollectible accounts and wrote off a large amount of its receivables.

C To match the terms offered by its closest competitor, the company adopted new payment terms now requiring net payment within 30 days rather than 15 days, which had been its previous requirement.

10 Brown Corporation had average days of sales outstanding of 19 days in the most recent fiscal year. Brown wants to improve its credit policies and collection practices and decrease its collection period in the next fiscal year to match the industry average of 15 days. Credit sales in the most recent fiscal year were \$300 million, and Brown expects credit sales to increase to \$390 million in the next fiscal year. To achieve Brown's goal of decreasing the collection period, the change in the average accounts receivable balance that must occur is *closest* to:

A +\$0.41 million.

B –\$0.41 million.

C –\$1.22 million.

11 An analyst observes the following data for two companies:

	Company A (\$)	Company B (\$)
Revenue	4,500	6,000
Net income	50	1,000
Current assets	40,000	60,000
Total assets	100,000	700,000

	Company A ($)	Company B ($)
Current liabilities	10,000	50,000
Total debt	60,000	150,000
Shareholders' equity	30,000	500,000

Which of the following choices *best* describes reasonable conclusions that the analyst might make about the two companies' ability to pay their current and long-term obligations?

A Company A's current ratio of 4.0 indicates it is more liquid than Company B, whose current ratio is only 1.2, but Company B is more solvent, as indicated by its lower debt-to-equity ratio.

B Company A's current ratio of 0.25 indicates it is less liquid than Company B, whose current ratio is 0.83, and Company A is also less solvent, as indicated by a debt-to-equity ratio of 200 percent compared with Company B's debt-to-equity ratio of only 30 percent.

C Company A's current ratio of 4.0 indicates it is more liquid than Company B, whose current ratio is only 1.2, and Company A is also more solvent, as indicated by a debt-to-equity ratio of 200 percent compared with Company B's debt-to-equity ratio of only 30 percent.

The following information relates to Questions 12–15

The data in Exhibit 1 appear in the five-year summary of a major international company. A business combination with another major manufacturer took place in FY13.

Exhibit 1

	FY10	FY11	FY12	FY13	FY14
Financial statements	GBP m	GBP m	GBP m	GBP m	GBP m
Income statements					
Revenue	4,390	3,624	3,717	8,167	11,366
Profit before interest and taxation (EBIT)	844	700	704	933	1,579
Net interest payable	–80	–54	–98	–163	–188
Taxation	–186	–195	–208	–349	–579
Minorities	–94	–99	–105	–125	–167
Profit for the year	484	352	293	296	645
Balance sheets					
Fixed assets	3,510	3,667	4,758	10,431	11,483
Current asset investments, cash at bank and in hand	316	218	290	561	682
Other current assets	558	514	643	1,258	1,634
Total assets	4,384	4,399	5,691	12,250	13,799
Interest bearing debt (long term)	–602	–1,053	–1,535	–3,523	–3,707

(continued)

Exhibit 1 (Continued)

	FY10	FY11	FY12	FY13	FY14
Other creditors and provisions (current)	–1,223	–1,054	–1,102	–2,377	–3,108
Total liabilities	–1,825	–2,107	–2,637	–5,900	–6,815
Net assets	2,559	2,292	3,054	6,350	6,984
Shareholders' funds	2,161	2,006	2,309	5,572	6,165
Equity minority interests	398	286	745	778	819
Capital employed	2,559	2,292	3,054	6,350	6,984
Cash flow					
Working capital movements	–53	5	71	85	107
Net cash inflow from operating activities	864	859	975	1,568	2,292

12 The company's total assets at year-end FY9 were GBP 3,500 million. Which of the following choices *best* describes reasonable conclusions an analyst might make about the company's efficiency?

A Comparing FY14 with FY10, the company's efficiency improved, as indicated by a total asset turnover ratio of 0.86 compared with 0.64.

B Comparing FY14 with FY10, the company's efficiency deteriorated, as indicated by its current ratio.

C Comparing FY14 with FY10, the company's efficiency deteriorated due to asset growth faster than turnover revenue growth.

13 Which of the following choices *best* describes reasonable conclusions an analyst might make about the company's solvency?

A Comparing FY14 with FY10, the company's solvency improved, as indicated by an increase in its debt-to-assets ratio from 0.14 to 0.27.

B Comparing FY14 with FY10, the company's solvency deteriorated, as indicated by a decrease in interest coverage from 10.6 to 8.4.

C Comparing FY14 with FY10, the company's solvency improved, as indicated by the growth in its profits to GBP 645 million.

14 Which of the following choices *best* describes reasonable conclusions an analyst might make about the company's liquidity?

A Comparing FY14 with FY10, the company's liquidity improved, as indicated by an increase in its debt-to-assets ratio from 0.14 to 0.27.

B Comparing FY14 with FY10, the company's liquidity deteriorated, as indicated by a decrease in interest coverage from 10.6 to 8.4.

C Comparing FY14 with FY10, the company's liquidity improved, as indicated by an increase in its current ratio from 0.71 to 0.75.

15 Which of the following choices *best* describes reasonable conclusions an analyst might make about the company's profitability?

A Comparing FY14 with FY10, the company's profitability improved, as indicated by an increase in its debt-to-assets ratio from 0.14 to 0.27.

B Comparing FY14 with FY10, the company's profitability deteriorated, as indicated by a decrease in its net profit margin from 11.0 percent to 5.7 percent.

C Comparing FY14 with FY10, the company's profitability improved, as indicated by the growth in its shareholders' equity to GBP 6,165 million.

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16 Assuming no changes in other variables, which of the following would decrease ROA?

A A decrease in the effective tax rate.

B A decrease in interest expense.

C An increase in average assets.

17 An analyst compiles the following data for a company:

	FY13	FY14	FY15
ROE	19.8%	20.0%	22.0%
Return on total assets	8.1%	8.0%	7.9%
Total asset turnover	2.0	2.0	2.1

Based only on the information above, the *most* appropriate conclusion is that, over the period FY13 to FY15, the company's:

A net profit margin and financial leverage have decreased.

B net profit margin and financial leverage have increased.

C net profit margin has decreased but its financial leverage has increased.

18 A decomposition of ROE for Integra SA is as follows:

	FY12	FY11
ROE	18.90%	18.90%
Tax burden	0.70	0.75
Interest burden	0.90	0.90
EBIT margin	10.00%	10.00%
Asset turnover	1.50	1.40
Leverage	2.00	2.00

Which of the following choices *best* describes reasonable conclusions an analyst might make based on this ROE decomposition?

A Profitability and the liquidity position both improved in FY12.

B The higher average tax rate in FY12 offset the improvement in profitability, leaving ROE unchanged.

C The higher average tax rate in FY12 offset the improvement in efficiency, leaving ROE unchanged.

19 A decomposition of ROE for Company A and Company B is as follows:

	Company A		Company B	
	FY15	FY14	FY15	FY14
ROE	26.46%	18.90%	26.33%	18.90%
Tax burden	0.7	0.75	0.75	0.75
Interest burden	0.9	0.9	0.9	0.9

(continued)

	Company A		Company B	
	FY15	**FY14**	**FY15**	**FY14**
EBIT margin	7.00%	10.00%	13.00%	10.00%
Asset turnover	1.5	1.4	1.5	1.4
Leverage	4	2	2	2

An analyst is *most likely* to conclude that:

A Company A's ROE is higher than Company B's in FY15, and one explanation consistent with the data is that Company A may have purchased new, more efficient equipment.

B Company A's ROE is higher than Company B's in FY15, and one explanation consistent with the data is that Company A has made a strategic shift to a product mix with higher profit margins.

C The difference between the two companies' ROE in FY15 is very small and Company A's ROE remains similar to Company B's ROE mainly due to Company A increasing its financial leverage.

20 What does the P/E ratio measure?

A The "multiple" that the stock market places on a company's EPS.

B The relationship between dividends and market prices.

C The earnings for one common share of stock.

21 A creditor *most likely* would consider a decrease in which of the following ratios to be positive news?

A Interest coverage (times interest earned).

B Debt-to-total assets.

C Return on assets.

22 When developing forecasts, analysts should *most likely*:

A develop possibilities relying exclusively on the results of financial analysis.

B use the results of financial analysis, analysis of other information, and judgment.

C aim to develop extremely precise forecasts using the results of financial analysis.

SOLUTIONS

1 C is correct. Cross-sectional analysis involves the comparison of companies with each other for the same time period. Technical analysis uses price and volume data as the basis for investment decisions. Time-series or trend analysis is the comparison of financial data across different time periods.

2 C is correct. Solvency ratios are used to evaluate the ability of a company to meet its long-term obligations. An analyst is more likely to use activity ratios to evaluate how efficiently a company uses its assets. An analyst is more likely to use liquidity ratios to evaluate the ability of a company to meet its short-term obligations.

3 A is correct. The current ratio is a liquidity ratio. It compares the net amount of current assets expected to be converted into cash within the year with liabilities falling due in the same period. A current ratio of 1.0 would indicate that the company would have just enough current assets to pay current liabilities.

4 C is correct. The fixed charge coverage ratio is a coverage ratio that relates known fixed charges or obligations to a measure of operating profit or cash flow generated by the company. Coverage ratios, a category of solvency ratios, measure the ability of a company to cover its payments related to debt and leases.

5 C is correct. The analyst is *unlikely* to reach the conclusion given in Statement C because days of sales outstanding increased from 23 days in FY1 to 25 days in FY2 to 28 days in FY3, indicating that the time required to collect receivables has increased over the period. This is a negative factor for Spherion's liquidity. By contrast, days of inventory on hand dropped over the period FY1 to FY3, a positive for liquidity. The company's increase in days payable, from 35 days to 40 days, shortened its cash conversion cycle, thus also contributing to improved liquidity.

6 A is correct. The company is becoming increasingly less solvent, as evidenced by its debt-to-equity ratio increasing from 0.35 to 0.50 from FY3 to FY5. The amount of a company's debt and equity do not provide direct information about the company's liquidity position.

Debt to equity:

FY5: 2,000/4,000 = 0.5000

FY4: 1,900/4,500 = 0.4222

FY3: 1,750/5,000 = 0.3500

7 C is correct. The decline in the company's equity indicates that the company may be incurring losses, paying dividends greater than income, or repurchasing shares. Recall that Beginning equity + New shares issuance – Shares repurchased + Comprehensive income – Dividends = Ending equity. The book value of a company's equity is not affected by changes in the market value of its common stock. An increased amount of lending does not necessarily indicate that lenders view a company as increasingly creditworthy. Creditworthiness is not evaluated based on how much a company has increased its debt but rather on its willingness and ability to pay its obligations. (Its financial strength is indicated by its solvency, liquidity, profitability, efficiency, and other aspects of credit analysis.)

8 C is correct. The company's problems with its inventory management system causing duplicate orders would likely result in a higher amount of inventory and would, therefore, result in a decrease in inventory turnover. A more efficient inventory management system and a write off of inventory at the beginning of

the period would both likely decrease the average inventory for the period (the denominator of the inventory turnover ratio), thus increasing the ratio rather than decreasing it.

9 B is correct. A write off of receivables would decrease the average amount of accounts receivable (the denominator of the receivables turnover ratio), thus increasing this ratio. Customers with weaker credit are more likely to make payments more slowly or to pose collection difficulties, which would likely increase the average amount of accounts receivable and thus decrease receivables turnover. Longer payment terms would likely increase the average amount of accounts receivable and thus decrease receivables turnover.

10 A is correct. The average accounts receivable balances (actual and desired) must be calculated to determine the desired change. The average accounts receivable balance can be calculated as an average day's credit sales times the DSO. For the most recent fiscal year, the average accounts receivable balance is $15.62 million [= ($300,000,000/365) × 19]. The desired average accounts receivable balance for the next fiscal year is $16.03 million (= ($390,000,000/365) × 15). This is an increase of $0.41 million (= 16.03 million – 15.62 million). An alternative approach is to calculate the turnover and divide sales by turnover to determine the average accounts receivable balance. Turnover equals 365 divided by DSO. Turnover is 19.21 (= 365/19) for the most recent fiscal year and is targeted to be 24.33 (= 365/15) for the next fiscal year. The average accounts receivable balances are $15.62 million (= $300,000,000/19.21), and $16.03 million (= $390,000,000/24.33). The change is an increase in receivables of $0.41 million

11 A is correct. Company A's current ratio of 4.0 (= $40,000/$10,000) indicates it is more liquid than Company B, whose current ratio is only 1.2 (= $60,000/$50,000). Company B is more solvent, as indicated by its lower debt-to-equity ratio of 30 percent (= $150,000/$500,000) compared with Company A's debt-to-equity ratio of 200 percent (= $60,000/$30,000).

12 C is correct. The company's efficiency deteriorated, as indicated by the decline in its total asset turnover ratio from 1.11 {= 4,390/[(4,384 + 3,500)/2]} for FY10 to 0.87 {= 11,366/[(12,250 + 13,799)/2]} for FY14. The decline in the total asset turnover ratio resulted from an increase in average total assets from GBP3,942 [= (4,384 + 3,500)/2] for FY10 to GBP13,024.5 for FY14, an increase of 230 percent, compared with an increase in revenue from GBP4,390 in FY10 to GBP11,366 in FY14, an increase of only 159 percent. The current ratio is not an indicator of efficiency.

13 B is correct. Comparing FY14 with FY10, the company's solvency deteriorated, as indicated by a decrease in interest coverage from 10.6 (= 844/80) in FY10 to 8.4 (= 1,579/188) in FY14. The debt-to-asset ratio increased from 0.14 (= 602/4,384) in FY10 to 0.27 (= 3,707/13,799) in FY14. This is also indicative of deteriorating solvency. In isolation, the amount of profits does not provide enough information to assess solvency.

14 C is correct. Comparing FY14 with FY10, the company's liquidity improved, as indicated by an increase in its current ratio from 0.71 [= (316 + 558)/1,223] in FY10 to 0.75 [= (682 + 1,634)/3,108] in FY14. Note, however, comparing only current investments with the level of current liabilities shows a decline in liquidity from 0.26 (= 316/1,223) in FY10 to 0.22 (= 682/3,108) in FY14. Debt-to-assets ratio and interest coverage are measures of solvency not liquidity.

15 B is correct. Comparing FY14 with FY10, the company's profitability deteriorated, as indicated by a decrease in its net profit margin from 11.0 percent (= 484/4,390) to 5.7 percent (= 645/11,366). Debt-to-assets ratio is a measure of solvency not an indicator of profitability. Growth in shareholders' equity, in isolation, does not provide enough information to assess profitability.

16 C is correct. Assuming no changes in other variables, an increase in average assets (an increase in the denominator) would decrease ROA. A decrease in either the effective tax rate or interest expense, assuming no changes in other variables, would increase ROA.

17 C is correct. The company's net profit margin has decreased and its financial leverage has increased. ROA = Net profit margin × Total asset turnover. ROA decreased over the period despite the increase in total asset turnover; therefore, the net profit margin must have decreased.

ROE = Return on assets × Financial leverage. ROE increased over the period despite the drop in ROA; therefore, financial leverage must have increased.

18 C is correct. The increase in the average tax rate in FY12, as indicated by the decrease in the value of the tax burden (the tax burden equals one minus the average tax rate), offset the improvement in efficiency indicated by higher asset turnover) leaving ROE unchanged. The EBIT margin, measuring profitability, was unchanged in FY12 and no information is given on liquidity.

19 C is correct. The difference between the two companies' ROE in 2010 is very small and is mainly the result of Company A's increase in its financial leverage, indicated by the increase in its Assets/Equity ratio from 2 to 4. The impact of efficiency on ROE is identical for the two companies, as indicated by both companies' asset turnover ratios of 1.5. Furthermore, if Company A had purchased newer equipment to replace older, depreciated equipment, then the company's asset turnover ratio (computed as sales/assets) would have declined, assuming constant sales. Company A has experienced a significant decline in its operating margin, from 10 percent to 7 percent which, all else equal, would not suggest that it is selling more products with higher profit margins.

20 A is correct. The P/E ratio measures the "multiple" that the stock market places on a company's EPS.

21 B is correct. In general, a creditor would consider a decrease in debt to total assets as positive news. A higher level of debt in a company's capital structure increases the risk of default and will, in general, result in higher borrowing costs for the company to compensate lenders for assuming greater credit risk. A decrease in either interest coverage or return on assets is likely to be considered negative news.

22 B is correct. The results of an analyst's financial analysis are integral to the process of developing forecasts, along with the analysis of other information and judgment of the analysts. Forecasts are not limited to a single point estimate but should involve a range of possibilities.

PRACTICE PROBLEMS

1 Inventory cost is *least likely* to include:
   A production-related storage costs.
   B costs incurred as a result of normal waste of materials.
   C transportation costs of shipping inventory to customers.

2 Mustard Seed PLC adheres to IFRS. It recently purchased inventory for €100 million and spent €5 million for storage prior to selling the goods. The amount it charged to inventory expense (€ millions) was *closest* to:
   A €95.
   B €100.
   C €105.

3 Carrying inventory at a value above its historical cost would *most likely* be permitted if:
   A the inventory was held by a producer of agricultural products.
   B financial statements were prepared using US GAAP.
   C the change resulted from a reversal of a previous write-down.

The following information relates to Questions 4 and 5.

A retail company is comparing different approaches to valuing inventory. The company has one product that it sells for $50.

Table 1 Units Purchased and Sold (first quarter)

Date	Units Purchased	Purchase Price	Units Sold	Selling Price	Inventory Units on Hand
2 Jan	1,000	$20.00			1,000
17 Jan			500	$50.00	500
16 Feb	1,000	$18.00			1,500
3 Mar			1,200	$50.00	300
13 Mar	1,000	$17.00			1,300
23 Mar			500	$50.00	800
End of quarter totals:	3,000	$55,000	2,200	$110,000	

Table 2 Comparison of Inventory Methods and Models

End of Quarter Valuations 31 March	Perpetual LIFO	Periodic LIFO	Perpetual FIFO
Sales	$110,000	$110,000	$110,000
Ending inventory		$16,000	$13,600
Cost of goods sold		$39,000	$41,400
Gross profit		$71,000	$68,600
Inventory turnover ratio	279%		

Note: LIFO is last in, first out and FIFO is first in, first out.

4 What is the value of ending inventory for the first quarter if the company uses a perpetual LIFO inventory valuation method?

A $14,500

B $15,000

C $16,000

5 Which inventory accounting method results in the lowest inventory turnover ratio for the first quarter?

A Periodic LIFO

B Perpetual LIFO

C Perpetual FIFO

6 During periods of rising inventory unit costs, a company using the FIFO method rather than the LIFO method will report a lower:

A current ratio.

B inventory turnover.

C gross profit margin.

7 LIFO reserve is *most likely* to increase when inventory unit:

A costs are increasing.

B costs are decreasing.

C levels are decreasing.

8 If inventory unit costs are increasing from period-to-period, a LIFO liquidation is *most likely* to result in an increase in:

A gross profit.

B LIFO reserve.

C inventory carrying amounts.

9 A company using the LIFO method reports the following in £:

	2018	2017
Cost of goods sold (COGS)	50,800	48,500
Ending inventories	10,550	10,000
LIFO reserve	4,320	2,600

Cost of goods sold for 2018 under the FIFO method is *closest* to:

A £48,530.

B £49,080.

C £52,520.

10 Eric's Used Book Store prepares its financial statements in accordance with IFRS. Inventory was purchased for £1 million and later marked down to £550,000. One of the books, however, was later discovered to be a rare collectible item, and the inventory is now worth an estimated £3 million. The inventory is *most likely* reported on the balance sheet at:

A £550,000.

B £1,000,000.

C £3,000,000.

11 Fernando's Pasta purchased inventory and later wrote it down. The current net realisable value is higher than the value when written down. Fernando's inventory balance will *most likely* be:

A higher if it complies with IFRS.

B higher if it complies with US GAAP.

C the same under US GAAP and IFRS.

12 A write down of the value of inventory to its net realizable value will have a positive effect on the:

A balance sheet.

B income statement.

C inventory turnover ratio.

For questions 13–24, assume the companies use a periodic inventory system.

13 Cinnamon Corp. started business in 2017 and uses the weighted average cost method. During 2017, it purchased 45,000 units of inventory at €10 each and sold 40,000 units for €20 each. In 2018, it purchased another 50,000 units at €11 each and sold 45,000 units for €22 each. Its 2018 cost of sales (€ thousands) was *closest* to:

A €490.

B €491.

C €495.

14 Zimt AG started business in 2017 and uses the FIFO method. During 2017, it purchased 45,000 units of inventory at €10 each and sold 40,000 units for €20 each. In 2018, it purchased another 50,000 units at €11 each and sold 45,000 units for €22 each. Its 2018 ending inventory balance (€ thousands) was *closest* to:

A €105.

B €109.

C €110.

15 Zimt AG uses the FIFO method, and Nutmeg Inc. uses the LIFO method. Compared to the cost of replacing the inventory, during periods of rising prices, the cost of sales reported by:

A Zimt is too low.

B Nutmeg is too low.

C Nutmeg is too high.

16 Zimt AG uses the FIFO method, and Nutmeg Inc. uses the LIFO method. Compared to the cost of replacing the inventory, during periods of rising prices the ending inventory balance reported by:

A Zimt is too high.

B Nutmeg is too low.

C Nutmeg is too high.

17 Like many technology companies, TechnoTools operates in an environment of declining prices. Its reported profits will tend to be *highest* if it accounts for inventory using the:

A FIFO method.

B LIFO method.

C weighted average cost method.

18 Compared to using the weighted average cost method to account for inventory, during a period in which prices are generally rising, the current ratio of a company using the FIFO method would *most likely* be:

A lower.

B higher.

C dependent upon the interaction with accounts payable.

19 Zimt AG wrote down the value of its inventory in 2017 and reversed the write-down in 2018. Compared to the ratios that would have been calculated if the write-down had never occurred, Zimt's reported 2017:

A current ratio was too high.

B gross margin was too high.

C inventory turnover was too high.

20 Zimt AG wrote down the value of its inventory in 2017 and reversed the write-down in 2018. Compared to the results the company would have reported if the write-down had never occurred, Zimt's reported 2018:

A profit was overstated.

B cash flow from operations was overstated.

C year-end inventory balance was overstated.

21 Compared to a company that uses the FIFO method, during periods of rising prices a company that uses the LIFO method will *most likely* appear more:

A liquid.

B efficient.

C profitable.

22 Nutmeg, Inc. uses the LIFO method to account for inventory. During years in which inventory unit costs are generally rising and in which the company purchases more inventory than it sells to customers, its reported gross profit margin will *most likely* be:

A lower than it would be if the company used the FIFO method.

B higher than it would be if the company used the FIFO method.

C about the same as it would be if the company used the FIFO method.

23 Compared to using the FIFO method to account for inventory, during periods of rising prices, a company using the LIFO method is *most likely* to report higher:

- **A** net income.
- **B** cost of sales.
- **C** income taxes.

24 Carey Company adheres to US GAAP, whereas Jonathan Company adheres to IFRS. It is *least likely* that:

- **A** Carey has reversed an inventory write-down.
- **B** Jonathan has reversed an inventory write-down.
- **C** Jonathan and Carey both use the FIFO inventory accounting method.

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25 Company A adheres to US GAAP and Company B adheres to IFRS. Which of the following is *most likely* to be disclosed on the financial statements of both companies?

- **A** Any material income resulting from the liquidation of LIFO inventory
- **B** The amount of inventories recognized as an expense during the period
- **C** The circumstances that led to the reversal of a write down of inventories

26 Which of the following *most likely* signals that a manufacturing company expects demand for its product to increase?

- **A** Finished goods inventory growth rate higher than the sales growth rate
- **B** Higher unit volumes of work in progress and raw material inventories
- **C** Substantially higher finished goods, with lower raw materials and work-in-process

27 Compared with a company that uses the FIFO method, during a period of rising unit inventory costs, a company using the LIFO method will *most likely* appear more:

- **A** liquid.
- **B** efficient.
- **C** profitable.

28 In a period of declining inventory unit costs and constant or increasing inventory quantities, which inventory method is *most likely* to result in a higher debt-to-equity ratio?

- **A** LIFO
- **B** FIFO
- **C** Weighted average cost

The following information relates to Questions 29–36

Hans Annan, CFA, a food and beverage analyst, is reviewing Century Chocolate's inventory policies as part of his evaluation of the company. Century Chocolate, based in Switzerland, manufactures chocolate products and purchases and resells other confectionery products to complement its chocolate line. Annan visited Century Chocolate's manufacturing facility last year. He learned that cacao beans, imported

from Brazil, represent the most significant raw material and that the work-in-progress inventory consists primarily of three items: roasted cacao beans, a thick paste produced from the beans (called chocolate liquor), and a sweetened mixture that needs to be "conched" to produce chocolate. On the tour, Annan learned that the conching process ranges from a few hours for lower-quality products to six days for the highest-quality chocolates. While there, Annan saw the facility's climate-controlled area where manufactured finished products (cocoa and chocolate) and purchased finished goods are stored prior to shipment to customers. After touring the facility, Annan had a discussion with Century Chocolate's CFO regarding the types of costs that were included in each inventory category.

Annan has asked his assistant, Joanna Kern, to gather some preliminary information regarding Century Chocolate's financial statements and inventories. He also asked Kern to calculate the inventory turnover ratios for Century Chocolate and another chocolate manufacturer for the most recent five years. Annan does not know Century Chocolate's most direct competitor, so he asks Kern to do some research and select the most appropriate company for the ratio comparison.

Kern reports back that Century Chocolate prepares its financial statements in accordance with IFRS. She tells Annan that the policy footnote states that raw materials and purchased finished goods are valued at purchase cost whereas work in progress and manufactured finished goods are valued at production cost. Raw material inventories and purchased finished goods are accounted for using the FIFO (first-in, first-out) method, and the weighted average cost method is used for other inventories. An allowance is established when the net realisable value of any inventory item is lower than the value calculated above.

Kern provides Annan with the selected financial statements and inventory data for Century Chocolate shown in Exhibits 1 through 5. The ratio exhibit Kern prepared compares Century Chocolate's inventory turnover ratios to those of Gordon's Goodies, a US-based company. Annan returns the exhibit and tells Kern to select a different competitor that reports using IFRS rather than US GAAP. During this initial review, Annan asks Kern why she has not indicated whether Century Chocolate uses a perpetual or a periodic inventory system. Kern replies that she learned that Century Chocolate uses a perpetual system but did not include this information in her report because inventory values would be the same under either a perpetual or periodic inventory system. Annan tells Kern she is wrong and directs her to research the matter.

While Kern is revising her analysis, Annan reviews the most recent month's Cocoa Market Review from the International Cocoa Organization. He is drawn to the statement that "the ICCO daily price, averaging prices in both futures markets, reached a 29-year high in US$ terms and a 23-year high in SDRs terms (the SDR unit comprises a basket of major currencies used in international trade: US$, euro, pound sterling and yen)." Annan makes a note that he will need to factor the potential continuation of this trend into his analysis.

Exhibit 1 Century Chocolate Income Statements (CHF Millions)

For Years Ended 31 December	2018	2017
Sales	95,290	93,248
Cost of sales	–41,043	–39,047
Marketing, administration, and other expenses	–35,318	–42,481
Profit before taxes	**18,929**	**11,720**
Taxes	–3,283	–2,962
Profit for the period	**15,646**	**8,758**

Exhibit 2 Century Chocolate Balance Sheets (CHF Millions)

31 December	2018	2017
Cash, cash equivalents, and short-term investments	6,190	8,252
Trade receivables and related accounts, net	11,654	12,910
Inventories, net	8,100	7,039
Other current assets	2,709	2,812
Total current assets	**28,653**	**31,013**
Property, plant, and equipment, net	18,291	19,130
Other non-current assets	45,144	49,875
Total assets	**92,088**	**100,018**
Trade and other payables	10,931	12,299
Other current liabilities	17,873	25,265
Total current liabilities	**28,804**	**37,564**
Non-current liabilities	15,672	14,963
Total liabilities	**44,476**	**52,527**
Equity		
Share capital	332	341
Retained earnings and other reserves	47,280	47,150
Total equity	**47,612**	**47,491**
Total liabilities and shareholders' equity	**92,088**	**100,018**

Exhibit 3 Century Chocolate Supplementary Footnote Disclosures: Inventories (CHF Millions)

31 December	2018	2017
Raw Materials	2,154	1,585
Work in Progress	1,061	1,027
Finished Goods	5,116	4,665
Total inventories before allowance	8,331	7,277
Allowance for write-downs to net realisable value	–231	–238
Total inventories net of allowance	8,100	7,039

Exhibit 4 Century Chocolate Inventory Record for Purchased Lemon Drops

Date		Cartons	Per Unit Amount (CHF)
	Beginning inventory	100	22
4 Feb 09	Purchase	40	25

(continued)

Exhibit 4 (Continued)

Date		Cartons	Per Unit Amount (CHF)
3 Apr 09	Sale	50	32
23 Jul 09	Purchase	70	30
16 Aug 09	Sale	100	32
9 Sep 09	Sale	35	32
15 Nov 09	Purchase	100	28

Exhibit 5 Century Chocolate Net Realisable Value Information for Black Licorice Jelly Beans

	2018	2017
FIFO cost of inventory at 31 December (CHF)	314,890	374,870
Ending inventory at 31 December (Kilograms)	77,750	92,560
Cost per unit (CHF)	4.05	4.05
Net Realisable Value (CHF per Kilograms)	4.20	3.95

29 The costs *least likely* to be included by the CFO as inventory are:

A storage costs for the chocolate liquor.

B excise taxes paid to the government of Brazil for the cacao beans.

C storage costs for chocolate and purchased finished goods awaiting shipment to customers.

30 What is the *most likely* justification for Century Chocolate's choice of inventory valuation method for its purchased finished goods?

A It is the preferred method under IFRS.

B It allocates the same per unit cost to both cost of sales and inventory.

C Ending inventory reflects the cost of goods purchased most recently.

31 In Kern's comparative ratio analysis, the 2018 inventory turnover ratio for Century Chocolate is *closest* to:

A 5.07.

B 5.42.

C 5.55.

32 The *most accurate* statement regarding Annan's reasoning for requiring Kern to select a competitor that reports under IFRS for comparative purposes is that under US GAAP:

A fair values are used to value inventory.

B the LIFO method is permitted to value inventory.

C the specific identification method is permitted to value inventory.

33 Annan's statement regarding the perpetual and periodic inventory systems is most significant when which of the following costing systems is used?

A LIFO.

B FIFO.

C Specific identification.

34 Using the inventory record for purchased lemon drops shown in Exhibit 4, the cost of sales for 2018 will be *closest* to:

A CHF 3,550.

B CHF 4,550.

C CHF 4,850.

35 Ignoring any tax effect, the 2018 net realisable value reassessment for the black licorice jelly beans will *most likely* result in:

A an increase in gross profit of CHF 7,775.

B an increase in gross profit of CHF 11,670.

C no impact on cost of sales because under IFRS, write-downs cannot be reversed.

36 If the trend noted in the ICCO report continues and Century Chocolate plans to maintain constant or increasing inventory quantities, the *most likely* impact on Century Chocolate's financial statements related to its raw materials inventory will be:

A a cost of sales that more closely reflects current replacement values.

B a higher allocation of the total cost of goods available for sale to cost of sales.

C a higher allocation of the total cost of goods available for sale to ending inventory.

The following information relates to Questions 37–42

John Martinson, CFA, is an equity analyst with a large pension fund. His supervisor, Linda Packard, asks him to write a report on Karp Inc. Karp prepares its financial statements in accordance with US GAAP. Packard is particularly interested in the effects of the company's use of the LIFO method to account for its inventory. For this purpose, Martinson collects the financial data presented in Exhibits 1 and 2.

Exhibit 1 Balance Sheet Information (US$ Millions)

As of 31 December	2018	2017
Cash and cash equivalents	172	157
Accounts receivable	626	458
Inventories	620	539
Other current assets	125	65
Total current assets	1,543	1,219
Property and equipment, net	3,035	2,972
Total assets	4,578	4,191
Total current liabilities	1,495	1,395
Long-term debt	644	604

(continued)

Exhibit 1 (Continued)

As of 31 December	2018	2017
Total liabilities	2,139	1,999
Common stock and paid in capital	1,652	1,652
Retained earnings	787	540
Total shareholders' equity	2,439	2,192
Total liabilities and shareholders' equity	4,578	4,191

Exhibit 2 Income Statement Information (US$ Millions)

For the Year Ended 31 December	2018	2017
Sales	4,346	4,161
Cost of goods sold	2,211	2,147
Depreciation and amortisation expense	139	119
Selling, general, and administrative expense	1,656	1,637
Interest expense	31	18
Income tax expense	62	48
Net income	247	192

Martinson finds the following information in the notes to the financial statements:

- The LIFO reserves as of 31 December 2018 and 2017 are $155 million and $117 million respectively, and
- The effective income tax rate applicable to Karp for 2018 and earlier periods is 20 percent.

37 If Karp had used FIFO instead of LIFO, the amount of inventory reported as of 31 December 2018 would have been *closest* to:

A $465 million.

B $658 million.

C $775 million.

38 If Karp had used FIFO instead of LIFO, the amount of cost of goods sold reported by Karp for the year ended 31 December 2018 would have been *closest* to:

A $2,056 million.

B $2,173 million.

C $2,249 million.

39 If Karp had used FIFO instead of LIFO, its reported net income for the year ended 31 December 2018 would have been higher by an amount *closest to*:

A $30 million.

B $38 million.

C $155 million.

40 If Karp had used FIFO instead of LIFO, Karp's retained earnings as of 31 December 2018 would have been higher by an amount *closest to*:

A $117 million.

B $124 million.

C $155 million.

41 If Karp had used FIFO instead of LIFO, which of the following ratios computed as of 31 December 2018 would *most likely* have been lower?

A Cash ratio.

B Current ratio.

C Gross profit margin.

42 If Karp had used FIFO instead of LIFO, its debt to equity ratio computed as of 31 December 2018 would have:

A increased.

B decreased.

C remained unchanged.

The following information relates to Questions 43–48

Robert Groff, an equity analyst, is preparing a report on Crux Corp. As part of his report, Groff makes a comparative financial analysis between Crux and its two main competitors, Rolby Corp. and Mikko Inc. Crux and Mikko report under US GAAP and Rolby reports under IFRS.

Groff gathers information on Crux, Rolby, and Mikko. The relevant financial information he compiles is in Exhibit 1. Some information on the industry is in Exhibit 2.

Exhibit 1 Selected Financial Information (US$ Millions)

	Crux	Rolby	Mikko
Inventory valuation method	LIFO	FIFO	LIFO
From the Balance Sheets			
As of 31 December 2018			
Inventory, gross	480	620	510
Valuation allowance	20	25	14
Inventory, net	460	595	496
Total debt	1,122	850	732
Total shareholders' equity	2,543	2,403	2,091
As of 31 December 2017			
Inventory, gross	465	602	401
Valuation allowance	23	15	12
Inventory, net	442	587	389
From the Income Statements			
Year Ended 31 December 2018			

(continued)

Exhibit 1 (Continued)

	Crux	Rolby	Mikko
Revenues	4,609	5,442	3,503
Cost of goods sold[a]	3,120	3,782	2,550
Net income	229	327	205
[a]Charges included in cost of goods sold for inventory write-downs*	13	15	15

* This does not match the change in the inventory valuation allowance because the valuation allowance is reduced to reflect the valuation allowance attached to items sold and increased for additional necessary write-downs.

LIFO Reserve			
As of 31 December 2018	55	0	77
As of 31 December 2017	72	0	50
As of 31 December 2016	96	0	43
Tax Rate			
Effective tax rate	30%	30%	30%

Exhibit 2 Industry Information

	2018	2017	2016
Raw materials price index	112	105	100
Finished goods price index	114	106	100

To compare the financial performance of the three companies, Groff decides to convert LIFO figures into FIFO figures, and adjust figures to assume no valuation allowance is recognized by any company.

After reading Groff's draft report, his supervisor, Rachel Borghi, asks him the following questions:

Question 1 Which company's gross profit margin would best reflect current costs of the industry?

Question 2 Would Rolby's valuation method show a higher gross profit margin than Crux's under an inflationary, a deflationary, or a stable price scenario?

Question 3 Which group of ratios usually appears more favorable with an inventory write-down?

43 Crux's inventory turnover ratio computed as of 31 December 2018, after the adjustments suggested by Groff, is *closest* to:

A 5.67.

B 5.83.

C 6.13.

44 Rolby's net profit margin for the year ended 31 December 2018, after the adjustments suggested by Groff, is *closest* to:

A 6.01%.

B 6.20%.

C 6.28%.

45 Compared with its unadjusted debt-to-equity ratio, Mikko's debt-to-equity ratio as of 31 December 2018, after the adjustments suggested by Groff, is:

A lower.

B higher.

C the same.

46 The *best* answer to Borghi's Question 1 is:

A Crux's.

B Rolby's.

C Mikko's.

47 The *best* answer to Borghi's Question 2 is:

A Stable.

B Inflationary.

C Deflationary.

48 The *best* answer to Borghi's Question 3 is:

A Activity ratios.

B Solvency ratios.

C Profitability ratios.

The following information relates to Questions 49–55

ZP Corporation is a (hypothetical) multinational corporation headquartered in Japan that trades on numerous stock exchanges. ZP prepares its consolidated financial statements in accordance with US GAAP. Excerpts from ZP's 2018 annual report are shown in Exhibits 1–3.

Exhibit 1 Consolidated Balance Sheets (¥ Millions)

31 December	2017	2018
Current Assets		
Cash and cash equivalents	¥542,849	¥814,760
⋮	⋮	⋮
Inventories	608,572	486,465
⋮	⋮	⋮
Total current assets	4,028,742	3,766,309
⋮	⋮	⋮
Total assets	**¥10,819,440**	**¥9,687,346**

(continued)

Exhibit 1 (Continued)

31 December	2017	2018
⋮	⋮	⋮
Total current liabilities	¥3,980,247	¥3,529,765
⋮	⋮	⋮
Total long-term liabilities	2,663,795	2,624,002
Minority interest in consolidated subsidiaries	218,889	179,843
Total shareholders' equity	3,956,509	3,353,736
Total liabilities and shareholders' equity	**¥10,819,440**	**¥9,687,346**

Exhibit 2 Consolidated Statements of Income (¥ Millions)

For the years ended 31 December	2016	2017	2018
Net revenues			
Sales of products	¥7,556,699	¥8,273,503	¥6,391,240
Financing operations	425,998	489,577	451,950
	7,982,697	8,763,080	6,843,190
Cost and expenses			
Cost of products sold	6,118,742	6,817,446	5,822,805
Cost of financing operations	290,713	356,005	329,128
Selling, general and administrative	827,005	832,837	844,927
⋮	⋮	⋮	⋮
Operating income (loss)	746,237	756,792	–153,670
⋮	⋮	⋮	⋮
Net income	¥548,011	¥572,626	–¥145,646

Exhibit 3 Selected Disclosures in the 2018 Annual Report

Management's Discussion and Analysis of Financial Condition and Results of Operations

Cost reduction efforts were offset by increased prices of raw materials, other production materials and parts … Inventories decreased during fiscal 2009 by ¥122.1 billion, or 20.1%, to ¥486.5 billion. This reflects the impacts of decreased sales volumes and fluctuations in foreign currency translation rates.

Management & Corporate Information

Risk Factors

Industry and Business Risks

Exhibit 3 (Continued)

The worldwide market for our products is highly competitive. ZP faces intense competition from other manufacturers in the respective markets in which it operates. Competition has intensified due to the worldwide deterioration in economic conditions. In addition, competition is likely to further intensify because of continuing globalization, possibly resulting in industry reorganization. Factors affecting competition include product quality and features, the amount of time required for innovation and development, pricing, reliability, safety, economy in use, customer service and financing terms. Increased competition may lead to lower unit sales and excess production capacity and excess inventory. This may result in a further downward price pressure.

ZP's ability to adequately respond to the recent rapid changes in the industry and to maintain its competitiveness will be fundamental to its future success in maintaining and expanding its market share in existing and new markets.

Notes to Consolidated Financial Statements

2. Summary of significant accounting policies:

Inventories. Inventories are valued at cost, not in excess of market. Cost is determined on the "average-cost" basis, except for the cost of finished products carried by certain subsidiary companies which is determined "last-in, first-out" ("LIFO") basis. Inventories valued on the LIFO basis totaled ¥94,578 million and ¥50,037 million at December 31, 2017 and 2018, respectively. Had the "first-in, first-out" basis been used for those companies using the LIFO basis, inventories would have been ¥10,120 million and ¥19,660 million higher than reported at December 31, 2017 and 2018, respectively.

9. Inventories:

Inventories consist of the following:

31 December (¥ Millions)	2017	2018
Finished goods	¥ 403,856	¥ 291,977
Raw materials	99,869	85,966
Work in process	79,979	83,890
Supplies and other	24,868	24,632
	¥ 608,572	**¥ 486,465**

49 The MD&A indicated that the prices of raw material, other production materials, and parts increased. Based on the inventory valuation methods described in Note 2, which inventory classification would *least accurately* reflect current prices?

A Raw materials.

B Finished goods.

C Work in process.

50 The 2017 inventory value as reported on the 2018 Annual Report if the company had used the FIFO inventory valuation method instead of the LIFO inventory valuation method for a portion of its inventory would be *closest* to:

A ¥104,698 million.

B ¥506,125 million.

C ¥618,692 million.

51 If ZP had prepared its financial statement in accordance with IFRS, the inventory turnover ratio (using average inventory) for 2018 would be:

A lower.

B higher.

C the same.

52 Inventory levels decreased from 2017 to 2018 for all of the following reasons *except*:

A LIFO liquidation.

B decreased sales volume.

C fluctuations in foreign currency translation rates.

53 Which observation is *most likely* a result of looking only at the information reported in Note 9?

A Increased competition has led to lower unit sales.

B There have been significant price increases in supplies.

C Management expects a further downturn in sales during 2010.

54 Note 2 indicates that, "Inventories valued on the LIFO basis totaled ¥94,578 million and ¥50,037 million at December 31, 2017 and 2018, respectively." Based on this, the LIFO reserve should *most likely*:

A increase.

B decrease.

C remain the same.

55 The Industry and Business Risk excerpt states that, "Increased competition may lead to lower unit sales and excess production capacity and excess inventory. This may result in a further downward price pressure." The downward price pressure could lead to inventory that is valued above current market prices or net realisable value. Any write-downs of inventory are *least likely* to have a significant effect on the inventory valued using:

A weighted average cost.

B first-in, first-out (FIFO).

C last-in, first-out (LIFO).

SOLUTIONS

1 C is correct. Transportation costs incurred to ship inventory to customers are an expense and may not be capitalized in inventory. (Transportation costs incurred to bring inventory to the business location can be capitalized in inventory.) Storage costs required as part of production, as well as costs incurred as a result of normal waste of materials, can be capitalized in inventory. (Costs incurred as a result of abnormal waste must be expensed.)

2 B is correct. Inventory expense includes costs of purchase, costs of conversion, and other costs incurred in bringing the inventories to their present location and condition. It does not include storage costs not required as part of production.

3 A is correct. IFRS allow the inventories of producers and dealers of agricultural and forest products, agricultural produce after harvest, and minerals and mineral products to be carried at net realisable value even if above historical cost. (US GAAP treatment is similar.)

4 A is correct. A perpetual inventory system updates inventory values and quantities and cost of goods sold continuously to reflect purchases and sales. The ending inventory of 800 units consists of 300 units at \$20 and 500 units at \$17.

$$(300 \times \$20) + (500 \times \$17) = \$14{,}500$$

5 A is correct. In an environment with falling inventory costs and declining inventory levels, periodic LIFO will result in a higher ending inventory value and lower cost of goods sold versus perpetual LIFO and perpetual FIFO methods. This results in a lower inventory turnover ratio, which is calculated as follows:

Inventory turnover ratio = Cost of goods sold/Ending inventory

The inventory turnover ratio using periodic LIFO is \$39,000/\$16,000 = 244% or 2.44 times.

The inventory turnover ratio using perpetual LIFO is 279% or 2.79 times, which is provided in Table 2 (= 40,500/14,500 from previous question).

The inventory turnover for perpetual FIFO is \$41,400/\$13,600 = 304% or 3.04 times.

6 B is correct. During a period of rising inventory costs, a company using the FIFO method will allocate a lower amount to cost of goods sold and a higher amount to ending inventory as compared with the LIFO method. The inventory turnover ratio is the ratio of cost of sales to ending inventory. A company using the FIFO method will produce a lower inventory turnover ratio as compared with the LIFO method. The current ratio (current assets/current liabilities) and the gross profit margin [gross profit/sales = (sales less cost of goods sold)/sales] will be higher under the FIFO method than under the LIFO method in periods of rising inventory unit costs.

7 A is correct. LIFO reserve is the FIFO inventory value less the LIFO inventory value. In periods of rising inventory unit costs, the carrying amount of inventory under FIFO will always exceed the carrying amount of inventory under LIFO. The LIFO reserve may increase over time as a result of the increasing difference between the older costs used to value inventory under LIFO and the

more recent costs used to value inventory under FIFO. When inventory unit levels are decreasing, the company will experience a LIFO liquidation, reducing the LIFO reserve.

8 A is correct. When the number of units sold exceeds the number of units purchased, a company using LIFO will experience a LIFO liquidation. If inventory unit costs have been rising from period-to-period and a LIFO liquidation occurs, it will produce an increase in gross profit as a result of the lower inventory carrying amounts of the liquidated units (lower cost per unit of the liquidated units).

9 B is correct. The adjusted COGS under the FIFO method is equal to COGS under the LIFO method less the increase in LIFO reserve:

COGS (FIFO) = COGS (LIFO) – Increase in LIFO reserve
COGS (FIFO) = £50,800 – (£4,320 – £2,600)
COGS (FIFO) = £49,080

10 B is correct. Under IFRS, the reversal of write-downs is required if net realisable value increases. The inventory will be reported on the balance sheet at £1,000,000. The inventory is reported at the lower of cost or net realisable value. Under US GAAP, inventory is carried at the lower of cost or market value. After a write-down, a new cost basis is determined and additional revisions may only reduce the value further. The reversal of write-downs is not permitted.

11 A is correct. IFRS require the reversal of inventory write-downs if net realisable values increase; US GAAP do not permit the reversal of write-downs.

12 C is correct. Activity ratios (for example, inventory turnover and total asset turnover) will be positively affected by a write down to net realizable value because the asset base (denominator) is reduced. On the balance sheet, the inventory carrying amount is written down to its net realizable value and the loss in value (expense) is generally reflected on the income statement in cost of goods sold, thus reducing gross profit, operating profit, and net income.

13 B is correct. Cinnamon uses the weighted average cost method, so in 2018, 5,000 units of inventory were 2017 units at €10 each and 50,000 were 2008 purchases at €11. The weighted average cost of inventory during 2008 was thus (5,000 × 10) + (50,000 × 11) = 50,000 + 550,000 = €600,000, and the weighted average cost was approximately €10.91 = €600,000/55,000. Cost of sales was €10.91 × 45,000, which is approximately €490,950.

14 C is correct. Zimt uses the FIFO method, and thus the first 5,000 units sold in 2018 depleted the 2017 inventory. Of the inventory purchased in 2018, 40,000 units were sold and 10,000 remain, valued at €11 each, for a total of €110,000.

15 A is correct. Zimt uses the FIFO method, so its cost of sales represents units purchased at a (no longer available) lower price. Nutmeg uses the LIFO method, so its cost of sales is approximately equal to the current replacement cost of inventory.

16 B is correct. Nutmeg uses the LIFO method, and thus some of the inventory on the balance sheet was purchased at a (no longer available) lower price. Zimt uses the FIFO method, so the carrying value on the balance sheet represents the most recently purchased units and thus approximates the current replacement cost.

17 B is correct. In a declining price environment, the newest inventory is the lowest-cost inventory. In such circumstances, using the LIFO method (selling the newer, cheaper inventory first) will result in lower cost of sales and higher profit.

18 B is correct. In a rising price environment, inventory balances will be higher for the company using the FIFO method. Accounts payable are based on amounts due to suppliers, not the amounts accrued based on inventory accounting.

19 C is correct. The write-down reduced the value of inventory and increased cost of sales in 2017. The higher numerator and lower denominator mean that the inventory turnover ratio as reported was too high. Gross margin and the current ratio were both too low.

20 A is correct. The reversal of the write-down shifted cost of sales from 2018 to 2017. The 2017 cost of sales was higher because of the write-down, and the 2018 cost of sales was lower because of the reversal of the write-down. As a result, the reported 2018 profits were overstated. Inventory balance in 2018 is the same because the write-down and reversal cancel each other out. Cash flow from operations is not affected by the non-cash write-down, but the higher profits in 2018 likely resulted in higher taxes and thus lower cash flow from operations.

21 B is correct. LIFO will result in lower inventory and higher cost of sales. Gross margin (a profitability ratio) will be lower, the current ratio (a liquidity ratio) will be lower, and inventory turnover (an efficiency ratio) will be higher.

22 A is correct. LIFO will result in lower inventory and higher cost of sales in periods of rising costs compared to FIFO. Consequently, LIFO results in a lower gross profit margin than FIFO.

23 B is correct. The LIFO method increases cost of sales, thus reducing profits and the taxes thereon.

24 A is correct. US GAAP do not permit inventory write-downs to be reversed.

25 B is correct. Both US GAAP and IFRS require disclosure of the amount of inventories recognized as an expense during the period. Only US GAAP allows the LIFO method and requires disclosure of any material amount of income resulting from the liquidation of LIFO inventory. US GAAP does not permit the reversal of prior-year inventory write downs.

26 B is correct. A significant increase (attributable to increases in unit volume rather than increases in unit cost) in raw materials and/or work-in-progress inventories may signal that the company expects an increase in demand for its products. If the growth of finished goods inventories is greater than the growth of sales, it could indicate a decrease in demand and a decrease in future earnings. A substantial increase in finished goods inventories while raw materials and work-in-progress inventories are declining may signal a decrease in demand for the company's products.

27 B is correct. During a period of rising inventory prices, a company using the LIFO method will have higher cost of cost of goods sold and lower inventory compared with a company using the FIFO method. The inventory turnover ratio will be higher for the company using the LIFO method, thus making it appear more efficient. Current assets and gross profit margin will be lower for the company using the LIFO method, thus making it appear less liquid and less profitable.

28 B is correct. In an environment of declining inventory unit costs and constant or increasing inventory quantities, FIFO (in comparison with weighted average cost or LIFO) will have higher cost of goods sold (and net income) and lower inventory. Because both inventory and net income are lower, total equity is lower, resulting in a higher debt-to-equity ratio.

29 C is correct. The storage costs for inventory awaiting shipment to customers are not costs of purchase, costs of conversion, or other costs incurred in bringing the inventories to their present location and condition and are not included in inventory. The storage costs for the chocolate liquor occur during the production process and are thus part of the conversion costs. Excise taxes are part of the purchase cost.

30 C is correct. The carrying amount of inventories under FIFO will more closely reflect current replacement values because inventories are assumed to consist of the most recently purchased items. FIFO is an acceptable, but not preferred, method under IFRS. Weighted average cost, not FIFO, is the cost formula that allocates the same per unit cost to both cost of sales and inventory.

31 B is correct. Inventory turnover = Cost of sales/Average inventory = 41,043/7,569.5 = 5.42. Average inventory is (8,100 + 7,039)/2 = 7,569.5.

32 B is correct. For comparative purposes, the choice of a competitor that reports under IFRS is requested because LIFO is permitted under US GAAP.

33 A is correct. The carrying amount of the ending inventory may differ because the perpetual system will apply LIFO continuously throughout the year, liquidating layers as sales are made. Under the periodic system, the sales will start from the last layer in the year. Under FIFO, the sales will occur from the same layers regardless of whether a perpetual or periodic system is used. Specific identification identifies the actual products sold and remaining in inventory, and there will be no difference under a perpetual or periodic system.

34 B is correct. The cost of sales is closest to CHF 4,550. Under FIFO, the inventory acquired first is sold first. Using Exhibit 4, a total of 310 cartons were available for sale (100 + 40 + 70 + 100) and 185 cartons were sold (50 + 100 + 35), leaving 125 in ending inventory. The FIFO cost would be as follows:

100 (beginning inventory) × 22 = 2,200

40 (4 February 2009) × 25 = 1,000

45 (23 July 2009) × 30 = 1,350

Cost of sales = 2,200 + 1,000 + 1,350 = CHF 4,550

35 A is correct. Gross profit will most likely increase by CHF 7,775. The net realisable value has increased and now exceeds the cost. The write-down from 2017 can be reversed. The write-down in 2017 was 9,256 [92,560 × (4.05 – 3.95)]. IFRS require the reversal of any write-downs for a subsequent increase in value of inventory previously written down. The reversal is limited to the lower of the subsequent increase or the original write-down. Only 77,750 kilograms remain in inventory; the reversal is 77,750 × (4.05 – 3.95) = 7,775. The amount of any reversal of a write-down is recognised as a reduction in cost of sales. This reduction results in an increase in gross profit.

36 C is correct. Using the FIFO method to value inventories when prices are rising will allocate more of the cost of goods available for sale to ending inventories (the most recent purchases, which are at higher costs, are assumed to remain in inventory) and less to cost of sales (the oldest purchases, which are at lower costs, are assumed to be sold first).

37 C is correct. Karp's inventory under FIFO equals Karp's inventory under LIFO plus the LIFO reserve. Therefore, as of 31 December 2018, Karp's inventory under FIFO equals:

$$\begin{aligned}\text{Inventory (FIFO method)} &= \text{Inventory (LIFO method)} + \text{LIFO reserve}\\ &= \$620 \text{ million} + 155 \text{ million}\\ &= \$775 \text{ million}\end{aligned}$$

38 B is correct. Karp's cost of goods sold (COGS) under FIFO equals Karp's cost of goods sold under LIFO minus the increase in the LIFO reserve. Therefore, for the year ended 31 December 2018, Karp's cost of goods sold under FIFO equals:

$$\begin{aligned}\text{COGS (FIFO method)} &= \text{COGS (LIFO method)} - \text{Increase in LIFO reserve}\\ &= \$2{,}211 \text{ million} - (155 \text{ million} - 117 \text{ million})\\ &= \$2{,}173 \text{ million}\end{aligned}$$

39 A is correct. Karp's net income (NI) under FIFO equals Karp's net income under LIFO plus the after-tax increase in the LIFO reserve. For the year ended 31 December 2018, Karp's net income under FIFO equals:

$$\begin{aligned}\text{NI (FIFO method)} &= \text{NI (LIFO method)} + \text{Increase in LIFO reserve} \times (1 - \text{Tax rate})\\ &= \$247 \text{ million} + 38 \text{ million} \times (1 - 20\%)\\ &= \$277.4 \text{ million}\end{aligned}$$

Therefore, the increase in net income is:

$$\begin{aligned}\text{Increase in NI} &= \text{NI (FIFO method)} - \text{NI (LIFO method)}\\ &= \$277 \text{ million} - 247 \text{ million}\\ &= \$30.4 \text{ million}\end{aligned}$$

40 B is correct. Karp's retained earnings (RE) under FIFO equals Karp's retained earnings under LIFO plus the after-tax LIFO reserve. Therefore, for the year ended 31 December 2018, Karp's retained earnings under FIFO equals:

$$\begin{aligned}\text{RE (FIFO method)} &= \text{RE (LIFO method)} + \text{LIFO reserve} \times (1 - \text{Tax rate})\\ &= \$787 \text{ million} + 155 \text{ million} \times (1 - 20\%)\\ &= \$911 \text{ million}\end{aligned}$$

Therefore, the increase in retained earnings is:

$$\begin{aligned}\text{Increase in RE} &= \text{RE (FIFO method)} - \text{RE (LIFO method)}\\ &= \$911 \text{ million} - 787 \text{ million}\\ &= \$124 \text{ million}\end{aligned}$$

41 A is correct. The cash ratio (cash and cash equivalents ÷ current liabilities) would be lower because cash would have been less under FIFO. Karp's income before taxes would have been higher under FIFO, and consequently taxes paid by Karp would have also been higher and cash would have been lower. There is no impact on current liabilities. Both Karp's current ratio and gross profit margin would have been higher if FIFO had been used. The current ratio would have been higher because inventory under FIFO increases by a larger amount than the cash decreases for taxes paid. Because the cost of goods sold under FIFO is lower than under LIFO, the gross profit margin would have been higher.

42 B is correct. If Karp had used FIFO instead of LIFO, the debt-to-equity ratio would have decreased. No change in debt would have occurred, but shareholders' equity would have increased as a result of higher retained earnings.

43 B is correct. Crux's adjusted inventory turnover ratio must be computed using cost of goods sold (COGS) under FIFO and excluding charges for increases in valuation allowances.

COGS (adjusted) = COGS (LIFO method) – Charges included in cost of goods sold for inventory write-downs – Change in LIFO reserve
= \$3,120 million – 13 million – (55 million – 72 million)
= \$3,124 million

Note: Minus the change in LIFO reserve is equivalent to plus the decrease in LIFO reserve. The adjusted inventory turnover ratio is computed using average inventory under FIFO.

Ending inventory (FIFO) = Ending inventory (LIFO) + LIFO reserve

Ending inventory 2018 (FIFO) = \$480 + 55 = \$535

Ending inventory 2017 (FIFO) = \$465 + 72 = \$537

Average inventory = (\$535 + 537)/2 = \$536

Therefore, adjusted inventory turnover ratio equals:

Inventory turnover ratio = COGS/Average inventory = \$3,124/\$536 = 5.83

44 B is correct. Rolby's adjusted net profit margin must be computed using net income (NI) under FIFO and excluding charges for increases in valuation allowances.

NI (adjusted) = NI (FIFO method) + Charges, included in cost of goods sold for inventory write-downs, after tax
= \$327 million + 15 million × (1 – 30%)
= \$337.5 million

Therefore, adjusted net profit margin equals:

Net profit margin = NI/Revenues = \$337.5/\$5,442 = 6.20%

45 A is correct. Mikko's adjusted debt-to-equity ratio is lower because the debt (numerator) is unchanged and the adjusted shareholders' equity (denominator) is higher. The adjusted shareholders' equity corresponds to shareholders' equity under FIFO, excluding charges for increases in valuation allowances. Therefore, adjusted shareholders' equity is higher than reported (unadjusted) shareholders' equity.

46 C is correct. Mikko's and Crux's gross margin ratios would better reflect the current gross margin of the industry than Rolby because both use LIFO. LIFO recognizes as cost of goods sold the cost of the most recently purchased units, therefore, it better reflects replacement cost. However, Mikko's gross margin ratio best reflects the current gross margin of the industry because Crux's LIFO reserve is decreasing. This could reflect a LIFO liquidation by Crux which would distort gross profit margin.

47 B is correct. The FIFO method shows a higher gross profit margin than the LIFO method in an inflationary scenario, because FIFO allocates to cost of goods sold the cost of the oldest units available for sale. In an inflationary environment, these units are the ones with the lowest cost.

48 A is correct. An inventory write-down increases cost of sales and reduces profit and reduces the carrying value of inventory and assets. This has a negative effect on profitability and solvency ratios. However, activity ratios appear positively affected by a write-down because the asset base, whether total assets or inventory (denominator), is reduced. The numerator, sales, in total asset turnover is unchanged, and the numerator, cost of sales, in inventory turnover is increased. Thus, turnover ratios are higher and appear more favorable as the result of the write-down.

49 B is correct. Finished goods least accurately reflect current prices because some of the finished goods are valued under the "last-in, first-out" ("LIFO") basis. The costs of the newest units available for sale are allocated to cost of goods sold, leaving the oldest units (at lower costs) in inventory. ZP values raw materials and work in process using the weighted average cost method. While not fully reflecting current prices, some inflationary effect will be included in the inventory values.

50 C is correct. FIFO inventory = Reported inventory + LIFO reserve = ¥608,572 + 10,120 = ¥618,692. The LIFO reserve is disclosed in Note 2 of the notes to consolidated financial statements.

51 A is correct. The inventory turnover ratio would be lower. The average inventory would be higher under FIFO and cost of products sold would be lower by the increase in LIFO reserve. LIFO is not permitted under IFRS.

Inventory turnover ratio = Cost of products sold ÷ Average inventory

2018 inventory turnover ratio as reported = 10.63 = ¥5,822,805/[(608,572 + 486,465)/2].

2018 inventory turnover ratio adjusted to FIFO as necessary = 10.34 = [¥5,822,805 – (19,660 – 10,120)]/[(608,572 + 10,120 + 486,465 + 19,660)/2].

52 A is correct. No LIFO liquidation occurred during 2018; the LIFO reserve increased from ¥10,120 million in 2008 to ¥19,660 million in 2018. Management stated in the MD&A that the decrease in inventories reflected the impacts of decreased sales volumes and fluctuations in foreign currency translation rates.

53 C is correct. Finished goods and raw materials inventories are lower in 2018 when compared to 2017. Reduced levels of inventory typically indicate an anticipated business contraction.

54 B is correct. The decrease in LIFO inventory in 2018 would typically indicate that more inventory units were sold than produced or purchased. Accordingly, one would expect a liquidation of some of the older LIFO layers and the LIFO reserve to decrease. In actuality, the LIFO reserve *increased* from ¥10,120 million in 2017 to ¥19,660 million in 2009. This is not to be expected and is likely caused by the increase in prices of raw materials, other production materials, and parts of foreign currencies as noted in the MD&A. An analyst should seek to confirm this explanation.

55 B is correct. If prices have been decreasing, write-downs under FIFO are least likely to have a significant effect because the inventory is valued at closer to the new, lower prices. Typically, inventories valued using LIFO are less likely to incur inventory write-downs than inventories valued using weighted average cost or FIFO. Under LIFO, the *oldest* costs are reflected in the inventory carrying value on the balance sheet. Given increasing inventory costs, the inventory carrying values under the LIFO method are already conservatively presented at the oldest and lowest costs. Thus, it is far less likely that inventory write-downs will occur under LIFO; and if a write-down does occur, it is likely to be of a lesser magnitude.

PRACTICE PROBLEMS

1 JOOVI Inc. has recently purchased and installed a new machine for its manufacturing plant. The company incurred the following costs:

Purchase price	$12,980
Freight and insurance	$1,200
Installation	$700
Testing	$100
Maintenance staff training costs	$500

The total cost of the machine to be shown on JOOVI's balance sheet is *closest* to:

A $14,180.

B $14,980.

C $15,480.

2 Which costs incurred with the purchase of property and equipment are expensed?

A Delivery charges

B Installation and testing

C Training required to use the property and equipment

3 When constructing an asset for sale, directly related borrowing costs are *most likely*:

A expensed as incurred.

B capitalized as part of inventory.

C capitalized as part of property, plant, and equipment.

4 BAURU, S.A., a Brazilian corporation, borrows capital from a local bank to finance the construction of its manufacturing plant. The loan has the following conditions:

Borrowing date	1 January 2009
Amount borrowed	500 million Brazilian real (BRL)
Annual interest rate	14 percent
Term of the loan	3 years
Payment method	Annual payment of interest only. Principal amortization is due at the end of the loan term.

The construction of the plant takes two years, during which time BAURU earned BRL 10 million by temporarily investing the loan proceeds. Which of the following is the amount of interest related to the plant construction (in BRL million) that can be capitalized in BAURU's balance sheet?

A 130.

B 140.

C 210.

5 After reading the financial statements and footnotes of a company that follows IFRS, an analyst identified the following intangible assets:

- product patent expiring in 40 years;

- copyright with no expiration date; and
- goodwill acquired 2 years ago in a business combination.

Which of these assets is an intangible asset with a finite useful life?

	Product Patent	Copyright	Goodwill
A	Yes	Yes	No
B	Yes	No	No
C	No	Yes	Yes

6 Intangible assets with finite useful lives *mostly* differ from intangible assets with infinite useful lives with respect to accounting treatment of:

A revaluation.

B impairment.

C amortization.

7 Costs incurred for intangible assets are generally expensed when they are:

A internally developed.

B individually acquired.

C acquired in a business combination.

8 Under US GAAP, when assets are acquired in a business combination, goodwill *most likely* arises from:

A contractual or legal rights.

B assets that can be separated from the acquired company.

C assets that are neither tangible nor identifiable intangible assets.

9 All else equal, in the fiscal year when long-lived equipment is purchased:

A depreciation expense increases.

B cash from operations decreases.

C net income is reduced by the amount of the purchase.

10 Companies X and Z have the same beginning-of-the-year book value of equity and the same tax rate. The companies have identical transactions throughout the year and report all transactions similarly except for one. Both companies acquire a £300,000 printer with a three-year useful life and a salvage value of £0 on 1 January of the new year. Company X capitalizes the printer and depreciates it on a straight-line basis, and Company Z expenses the printer. The following year-end information is gathered for Company X.

	Company X As of 31 December
Ending shareholders' equity	£10,000,000
Tax rate	25%
Dividends	£0.00
Net income	£750,000

Based on the information given, Company Z's return on equity using year-end equity will be *closest* to:

A 5.4%.

B 6.1%.

C 7.5%.

11 A financial analyst is studying the income statement effect of two alternative depreciation methods for a recently acquired piece of equipment. She gathers the following information about the equipment's expected production life and use:

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Units of production	2,000	2,000	2,000	2,000	2,500	10,500

Compared with the units-of-production method of depreciation, if the company uses the straight-line method to depreciate the equipment, its net income in Year 1 will *most likely* be:

A lower.

B higher.

C the same.

12 A company purchases a piece of equipment for €1,500. The equipment is expected to have a useful life of five years and no residual value. In the first year of use, the units of production are expected to be 15% of the equipment's lifetime production capacity and the equipment is expected to generate €1,500 of revenue and incur €500 of cash expenses.

The depreciation method yielding the lowest operating profit on the equipment in the first year of use is:

A straight line.

B units of production.

C double-declining balance.

13 Juan Martinez, CFO of VIRMIN, S.A., is selecting the depreciation method to use for a new machine. The machine has an expected useful life of six years. Production is expected to be relatively low initially but to increase over time. The method chosen for tax reporting must be the same as the method used for financial reporting. If Martinez wants to minimize tax payments in the first year of the machine's life, which of the following depreciation methods is Martinez *most likely* to use?

A Straight-line method.

B Units-of-production method.

C Double-declining balance method.

The following information relates to Questions 14–15

Miguel Rodriguez of MARIO S.A., an Uruguayan corporation, is computing the depreciation expense of a piece of manufacturing equipment for the fiscal year ended 31 December 2009. The equipment was acquired on 1 January 2009. Rodriguez gathers the following information (currency in Uruguayan pesos, UYP):

Cost of the equipment	UYP 1,200,000
Estimated residual value	UYP 200,000
Expected useful life	8 years
Total productive capacity	800,000 units

Production in FY 2009	135,000 units
Expected production for the next 7 years	95,000 units each year

14 If MARIO uses the straight-line method, the amount of depreciation expense on MARIO's income statement related to the manufacturing equipment is *closest* to:

A 125,000.

B 150,000.

C 168,750.

15 If MARIO uses the units-of-production method, the amount of depreciation expense (in UYP) on MARIO's income statement related to the manufacturing equipment is *closest* to:

A 118,750.

B 168,750.

C 202,500.

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16 Which of the following amortization methods is *most likely* to evenly distribute the cost of an intangible asset over its useful life?

A Straight-line method.

B Units-of-production method.

C Double-declining balance method.

17 Which of the following will cause a company to show a lower amount of amortization of intangible assets in the first year after acquisition?

A A higher residual value.

B A higher amortization rate.

C A shorter useful life.

18 A company purchases equipment for $200,000 with a five-year useful life and salvage value of zero. It uses the double-declining balance method of depreciation for two years, then shifts to straight-line depreciation at the beginning of Year 3. Compared with annual depreciation expense under the double-declining balance method, the resulting annual depreciation expense in Year 4 is:

A smaller.

B the same.

C greater.

19 An analyst in the finance department of BOOLDO S.A., a French corporation, is computing the amortization of a customer list, an intangible asset, for the fiscal year ended 31 December 2009. She gathers the following information about the asset:

Acquisition cost	€2,300,000
Acquisition date	1 January 2008
Expected residual value at time of acquisition	€500,000

The customer list is expected to result in extra sales for three years after acquisition. The present value of these expected extra sales exceeds the cost of the list.

If the analyst uses the straight-line method, the amount of accumulated amortization related to the customer list as of 31 December 2009 is *closest* to:

A €600,000.

B €1,200,000.

C €1,533,333.

20 A financial analyst is analyzing the amortization of a product patent acquired by MAKETTI S.p.A., an Italian corporation. He gathers the following information about the patent:

Acquisition cost	€5,800,000
Acquisition date	1 January 2009
Patent expiration date	31 December 2015
Total plant capacity of patented product	40,000 units per year
Production of patented product in fiscal year ended 31 December 2009	20,000 units
Expected production of patented product during life of the patent	175,000 units

If the analyst uses the units-of-production method, the amortization expense on the patent for fiscal year 2009 is *closest* to:

A €414,286.

B €662,857.

C €828,571.

21 A company acquires a patent with an expiration date in six years for ¥100 million. The company assumes that the patent will generate economic benefits that will decline over time and decides to amortize the patent using the double-declining balance method. The annual amortization expense in Year 4 is closest to:

A ¥6.6 million.

B ¥9.9 million.

C ¥19.8 million.

22 A company is comparing straight-line and double-declining balance amortization methods for a non-renewable six-year license, acquired for €600,000. The difference between the Year 4 ending net book values using the two methods is *closest to*:

A €81,400.

B €118,600.

C €200,000.

23 MARU S.A. de C.V., a Mexican corporation that follows IFRS, has elected to use the revaluation model for its property, plant, and equipment. One of MARU's machines was purchased for 2,500,000 Mexican pesos (MXN) at the beginning of the fiscal year ended 31 March 2010. As of 31 March 2010, the machine has a fair value of MXN 3,000,000. Should MARU show a profit for the revaluation of the machine?

A Yes.

B No, because this revaluation is recorded directly in equity.

C No, because value increases resulting from revaluation can never be recognized as a profit.

24 An analyst is studying the impairment of the manufacturing equipment of WLP Corp., a UK-based corporation that follows IFRS. He gathers the following information about the equipment:

Fair value	£16,800,000
Costs to sell	£800,000
Value in use	£14,500,000
Net carrying amount	£19,100,000

The amount of the impairment loss on WLP Corp.'s income statement related to its manufacturing equipment is *closest* to:

A £2,300,000.

B £3,100,000.

C £4,600,000.

25 Under IFRS, an impairment loss on a property, plant, and equipment asset is measured as the excess of the carrying amount over the asset's:

A fair value.

B recoverable amount.

C undiscounted expected future cash flows.

26 A financial analyst at BETTO S.A. is analyzing the result of the sale of a vehicle for 85,000 Argentine pesos (ARP) on 31 December 2009. The analyst compiles the following information about the vehicle:

Acquisition cost of the vehicle	ARP 100,000
Acquisition date	1 January 2007
Estimated residual value at acquisition date	ARP 10,000
Expected useful life	9 years
Depreciation method	Straight-line

The result of the sale of the vehicle is *most likely*:

A a loss of ARP 15,000.

B a gain of ARP 15,000.

C a gain of ARP 18,333.

27 CROCO S.p.A sells an intangible asset with a historical acquisition cost of €12 million and an accumulated depreciation of €2 million and reports a loss on the sale of €3.2 million. Which of the following amounts is *most likely* the sale price of the asset?

A €6.8 million

B €8.8 million

C €13.2 million

28 The impairment of intangible assets with finite lives affects:

A the balance sheet but not the income statement.

B the income statement but not the balance sheet.

C both the balance sheet and the income statement.

29 The gain or loss on a sale of a long-lived asset to which the revaluation model has been applied is *most likely* calculated using sales proceeds less:

A carrying amount.

B carrying amount adjusted for impairment.

C historical cost net of accumulated depreciation.

30 According to IFRS, all of the following pieces of information about property, plant, and equipment must be disclosed in a company's financial statements and footnotes *except for*:

A useful lives.

B acquisition dates.

C amount of disposals.

31 According to IFRS, all of the following pieces of information about intangible assets must be disclosed in a company's financial statements and footnotes *except for*:

A fair value.

B impairment loss.

C amortization rate.

32 Which of the following is a required financial statement disclosure for long-lived intangible assets under US GAAP?

A The useful lives of assets

B The reversal of impairment losses

C Estimated amortization expense for the next five fiscal years

33 Which of the following characteristics is *most likely* to differentiate investment property from property, plant, and equipment?

A It is tangible.

B It earns rent.

C It is long-lived.

34 If a company uses the fair value model to value investment property, changes in the fair value of the asset are *least likely* to affect:

A net income.

B net operating income.

C other comprehensive income.

35 Investment property is *most likely* to:

A earn rent.

B be held for resale.

C be used in the production of goods and services.

36 A company is *most likely* to:

A use a fair value model for some investment property and a cost model for other investment property.

B change from the fair value model when transactions on comparable properties become less frequent.

C change from the fair value model when the company transfers investment property to property, plant, and equipment.

37 Under the revaluation model for property, plant, and equipment and the fair model for investment property:

A fair value of the asset must be able to be measured reliably.

B net income is affected by all changes in the fair value of the asset.

C net income is never affected if the asset increases in value from its carrying amount.

38 Under IFRS, what must be disclosed under the cost model of valuation for investment properties?

A Useful lives

B The method for determining fair value

C Reconciliation between beginning and ending carrying amounts of investment property

The following information relates to Questions 39–42

Melanie Hart, CFA, is a transportation analyst. Hart has been asked to write a research report on Altai Mountain Rail Company (AMRC). Like other companies in the railroad industry, AMRC's operations are capital intensive, with significant investments in such long-lived tangible assets as property, plant, and equipment. In November of 2008, AMRC's board of directors hired a new team to manage the company. In reviewing the company's 2009 annual report, Hart is concerned about some of the accounting choices that the new management has made. These choices differ from those of the previous management and from common industry practice. Hart has highlighted the following statements from the company's annual report:

Statement 1 "In 2009, AMRC spent significant amounts on track replacement and similar improvements. AMRC expensed rather than capitalised a significant proportion of these expenditures."

Statement 2 "AMRC uses the straight-line method of depreciation for both financial and tax reporting purposes to account for plant and equipment."

Statement 3 "In 2009, AMRC recognized an impairment loss of €50 million on a fleet of locomotives. The impairment loss was reported as 'other income' in the income statement and reduced the carrying amount of the assets on the balance sheet."

Exhibits 1 and 2 contain AMRC's 2009 consolidated income statement and balance sheet. AMRC prepares its financial statements in accordance with International Financial Reporting Standards.

Exhibit 1 Consolidated Statement of Income

	2009		2008	
For the Years Ended 31 December	**€ Millions**	**% Revenues**	**€ Millions**	**% Revenues**
Operating revenues	2,600	100.0	2,300	100.0
Operating expenses				
Depreciation	(200)	(7.7)	(190)	(8.3)
Other operating expense	(1,590)	(61.1)	(1,515)	(65.9)
Total operating expenses	(1,790)	(68.8)	(1,705)	(74.2)
Operating income	810	31.2	595	25.8
Other income	(50)	(1.9)	—	0.0
Interest expense	(73)	(2.8)	(69)	(3.0)
Income before taxes	687	26.5	526	22.8

(continued)

Exhibit 1 (Continued)

For the Years Ended 31 December	2009 € Millions	2009 % Revenues	2008 € Millions	2008 % Revenues
Income taxes	(272)	(10.5)	(198)	(8.6)
Net income	415	16	328	14.2

Exhibit 2 Consolidated Balance Sheet

As of 31 December	2009		2008	
Assets	**€ Millions**	**% Assets**	**€ Millions**	**% Assets**
Current assets	500	9.4	450	8.5
Property & equipment:				
Land	700	13.1	700	13.2
Plant & equipment	6,000	112.1	5,800	109.4
Total property & equipment	6,700	125.2	6,500	122.6
Accumulated depreciation	(1,850)	(34.6)	(1,650)	(31.1)
Net property & equipment	4,850	90.6	4,850	91.5
Total assets	5,350	100.0	5,300	100.0
Liabilities and Shareholders' Equity				
Current liabilities	480	9.0	430	8.1
Long-term debt	1,030	19.3	1,080	20.4
Other long-term provisions and liabilities	1,240	23.1	1,440	27.2
Total liabilities	2,750	51.4	2,950	55.7
Shareholders' equity				
Common stock and paid-in-surplus	760	14.2	760	14.3
Retained earnings	1,888	35.5	1,600	30.2
Other comprehensive losses	(48)	(0.9)	(10)	(0.2)
Total shareholders' equity	2,600	48.6	2,350	44.3
Total liabilities & shareholders' equity	5,350	100.0	5,300	100.0

39 With respect to Statement 1, which of the following is the *most likely* effect of management's decision to expense rather than capitalise these expenditures?

A 2009 net profit margin is higher than if the expenditures had been capitalised.

B 2009 total asset turnover is lower than if the expenditures had been capitalised.

C Future profit growth will be higher than if the expenditures had been capitalised.

40 With respect to Statement 2, what would be the *most likely* effect in 2010 if AMRC were to switch to an accelerated depreciation method for both financial and tax reporting?

A Net profit margin would increase.

B Total asset turnover would decrease.

C Cash flow from operating activities would increase.

41 With respect to Statement 3, what is the *most likely* effect of the impairment loss?

A Net income in years prior to 2009 was likely understated.

B Net profit margins in years after 2009 will likely exceed the 2009 net profit margin.

C Cash flow from operating activities in 2009 was likely lower due to the impairment loss.

42 Based on Exhibits 1 and 2, the *best estimate* of the average remaining useful life of the company's plant and equipment at the end of 2009 is:

A 20.75 years.

B 24.25 years.

C 30.00 years.

The following information relates to Questions 43–48

Brian Jordan is interviewing for a junior equity analyst position at Orion Investment Advisors. As part of the interview process, Mary Benn, Orion's Director of Research, provides Jordan with information about two hypothetical companies, Alpha and Beta, and asks him to comment on the information on their financial statements and ratios. Both companies prepare their financial statements in accordance with International Financial Reporting Standards (IFRS) and are identical in all respects except for their accounting choices.

Jordan is told that at the beginning of the current fiscal year, both companies purchased a major new computer system and began building new manufacturing plants for their own use. Alpha capitalised and Beta expensed the cost of the computer system; Alpha capitalised and Beta expensed the interest costs associated with the construction of the manufacturing plants.

Benn asks Jordan, "What was the impact of these decisions on each company's current fiscal year financial statements and ratios?"

Jordan responds, "Alpha's decision to capitalise the cost of its new computer system instead of expensing it results in lower net income, lower total assets, and higher cash flow from operating activities in the current fiscal year. Alpha's decision to capitalise its interest costs instead of expensing them results in a lower fixed asset turnover ratio and a higher interest coverage ratio."

Jordan is told that Alpha uses the straight-line depreciation method and Beta uses an accelerated depreciation method; both companies estimate the same useful lives for long-lived assets. Many companies in their industry use the units-of-production method.

Benn asks Jordan, "What are the financial statement implications of each depreciation method, and how do you determine a company's need to reinvest in its productive capacity?"

Jordan replies, "All other things being equal, the straight-line depreciation method results in the least variability of net profit margin over time, while an accelerated depreciation method results in a declining trend in net profit margin over time. The units-of-production can result in a net profit margin trend that is quite variable. I use a three-step approach to estimate a company's need to reinvest in its productive capacity. First, I estimate the average age of the assets by dividing net property, plant, and equipment by annual depreciation expense. Second, I estimate the average remaining useful life of the assets by dividing accumulated depreciation by depreciation expense. Third, I add the estimates of the average remaining useful life and the average age of the assets in order to determine the total useful life."

Jordan is told that at the end of the current fiscal year, Alpha revalued a manufacturing plant; this increased its reported carrying amount by 15 percent. There was no previous downward revaluation of the plant. Beta recorded an impairment loss on a manufacturing plant; this reduced its carrying by 10 percent.

Benn asks Jordan "What was the impact of these decisions on each company's current fiscal year financial ratios?"

Jordan responds, "Beta's impairment loss increases its debt to total assets and fixed asset turnover ratios, and lowers its cash flow from operating activities. Alpha's revaluation increases its debt to capital and return on assets ratios, and reduces its return on equity."

At the end of the interview, Benn thanks Jordan for his time and states that a hiring decision will be made shortly.

43 Jordan's response about the financial statement impact of Alpha's decision to capitalise the cost of its new computer system is most likely *correct* with respect to:

A lower net income.

B lower total assets.

C higher cash flow from operating activities.

44 Jordan's response about the ratio impact of Alpha's decision to capitalise interest costs is most likely *correct* with respect to the:

A interest coverage ratio.

B fixed asset turnover ratio.

C interest coverage and fixed asset turnover ratios.

45 Jordan's response about the impact of the different depreciation methods on net profit margin is most likely *incorrect* with respect to:

A accelerated depreciation.

B straight-line depreciation.

C units-of-production depreciation.

46 Jordan's response about his approach to estimating a company's need to reinvest in its productive capacity is most likely *correct* regarding:

A estimating the average age of the asset base.

B estimating the total useful life of the asset base.

C estimating the average remaining useful life of the asset base.

47 Jordan's response about the effect of Beta's impairment loss is most likely *incorrect* with respect to the impact on its:

A debt to total assets.

B fixed asset turnover.

C cash flow from operating activities.

48 Jordan's response about the effect of Alpha's revaluation is most likely *correct* with respect to the impact on its:

A return on equity.

B return on assets.

C debt to capital ratio.

SOLUTIONS

1 B is correct. Only costs necessary for the machine to be ready to use can be capitalized. Therefore, Total capitalized costs = 12,980 + 1,200 + 700 + 100 = $14,980.

2 C is correct. When property and equipment are purchased, the assets are recorded on the balance sheet at cost. Costs for the assets include all expenditures required to prepare the assets for their intended use. Any other costs are expensed. Costs to train staff for using the machine are not required to prepare the property and equipment for their intended use, and these costs are expensed.

3 B is correct. When a company constructs an asset, borrowing costs incurred directly related to the construction are generally capitalized. If the asset is constructed for sale, the borrowing costs are classified as inventory.

4 A is correct. Borrowing costs can be capitalized under IFRS until the tangible asset is ready for use. Also, under IFRS, income earned on temporarily investing the borrowed monies decreases the amount of borrowing costs eligible for capitalization. Therefore, Total capitalized interest = (500 million × 14% × 2 years) − 10 million = 130 million.

5 B is correct. A product patent with a defined expiration date is an intangible asset with a finite useful life. A copyright with no expiration date is an intangible asset with an indefinite useful life. Goodwill is no longer considered an intangible asset under IFRS and is considered to have an indefinite useful life.

6 C is correct. An intangible asset with a finite useful life is amortized, whereas an intangible asset with an indefinite useful life is not.

7 A is correct. The costs to internally develop intangible assets are generally expensed when incurred.

8 C is correct. Under both International Financial Reporting Standards (IFRS) and US GAAP, if an item is acquired in a business combination and cannot be recognized as a tangible asset or identifiable intangible asset, it is recognized as goodwill. Under US GAAP, assets arising from contractual or legal rights and assets that can be separated from the acquired company are recognized separately from goodwill.

9 A is correct. In the fiscal year when long-lived equipment is purchased, the assets on the balance sheet increase and depreciation expense on the income statement increases because of the new long-lived asset.

10 B is correct. Company Z's return on equity based on year-end equity value will be 6.1%. Company Z will have an additional £200,000 of expenses compared with Company X. Company Z expensed the printer for £300,000 rather than capitalizing the printer and having a depreciation expense of £100,000 like Company X. Company Z's net income and shareholders' equity will be £150,000 lower (= £200,000 × 0.75) than that of Company X.

$$\begin{aligned}\text{ROE} &= \left(\frac{\text{Net income}}{\text{Shareholders' Equity}}\right)\\ &= £600{,}000/£9{,}850{,}000\\ &= 0.61 = 6.1\%\end{aligned}$$

11 A is correct. If the company uses the straight-line method, the depreciation expense will be one-fifth (20 percent) of the depreciable cost in Year 1. If it uses the units-of-production method, the depreciation expense will be 19 percent (2,000/10,500) of the depreciable cost in Year 1. Therefore, if the company uses the straight-line method, its depreciation expense will be higher and its net income will be lower.

12 C is correct. The operating income or earnings before interest and taxes will be lowest for the method that results in the highest depreciation expense. The double-declining balance method results in the highest depreciation expense in the first year of use.

Depreciation expense:

Straight line = €1,500/5 = €300.

Double-declining balance = €1,500 × 0.40 = €600.

Units of production = €1,500 × 0.15 = €225.

13 C is correct. If Martinez wants to minimize tax payments in the first year of the machine's life, he should use an accelerated method, such as the double-declining balance method.

14 A is correct. Using the straight-line method, depreciation expense amounts to

Depreciation expense = (1,200,000 – 200,000)/8 years = 125,000.

15 B is correct. Using the units-of-production method, depreciation expense amounts to

Depreciation expense = (1,200,000 – 200,000) × (135,000/800,000) = 168,750.

16 A is correct. The straight-line method is the method that evenly distributes the cost of an asset over its useful life because amortization is the same amount every year.

17 A is correct. A higher residual value results in a lower total depreciable cost and, therefore, a lower amount of amortization in the first year after acquisition (and every year after that).

18 C is correct. Shifting at the end of Year 2 from double-declining balance to straight-line depreciation methodology results in depreciation expense being the same in each of Years 3, 4, and 5. Shifting to the straight-line methodology at the beginning of Year 3 results in a greater depreciation expense in Year 4 than would have been calculated using the double-declining balance method.

Depreciation expense Year 4 (Using double-declining balance method all five years)

= 2 × Annual depreciation % using straight-line method × Carrying amount at end of Year 3
= 40% × $43,200

Depreciation expense Year 4 with switch to straight-line method in Year 3

= ⅓ × Remaining depreciable cost at start of Year 3
= ⅓ × $72,000
= $24,000

19 B is correct. Using the straight-line method, accumulated amortization amounts to

$$\begin{aligned}\text{Accumulated amortization} &= [(2{,}300{,}000 - 500{,}000)/3 \text{ years}] \times 2 \text{ years}\\ &= 1{,}200{,}000\end{aligned}$$

20 B is correct. Using the units-of-production method, depreciation expense amounts to

$$\text{Depreciation expense} = 5{,}800{,}000 \times (20{,}000/175{,}000) = 662{,}857$$

21 B is correct. As shown in the following calculations, under the double-declining balance method, the annual amortization expense in Year 4 is closest to ¥9.9 million.

Annual amortization expense = 2 × Straight-line amortization rate × Net book value.

Amortization expense Year 4 = 33.3% × ¥29.6 million = ¥9.9 million.

22 A is correct. As shown in the following calculations, at the end of Year 4, the difference between the net book values calculated using straight-line versus double-declining balance is closest to €81,400.

Net book value end of Year 4 using straight-line method = €600,000 – [4 × (€600,000/6)] = €200,000.

Net book value end of Year 4 using double-declining balance method = €600,000 $(1 - 33.33\%)^4 \approx$ €118,600.

23 B is correct. In this case, the value increase brought about by the revaluation should be recorded directly in equity. The reason is that under IFRS, an increase in value brought about by a revaluation can only be recognized as a profit to the extent that it reverses a revaluation decrease of the same asset previously recognized in the income statement.

24 B is correct. The impairment loss equals £3,100,000.

$$\begin{aligned}\text{Impairment} &= \max(\text{Fair value less costs to sell; Value in use}) - \text{Net carrying amount}\\ &= \max(16{,}800{,}000 - 800{,}000;\ 14{,}500{,}000) - 19{,}100{,}000\\ &= -3{,}100{,}000.\end{aligned}$$

25 B is correct. Under IFRS, an impairment loss is measured as the excess of the carrying amount over the asset's recoverable amount. The recoverable amount is the higher of the asset's fair value less costs to sell and its value in use. Value in use is a discounted measure of expected future cash flows. Under US GAAP, assessing recoverability is separate from measuring the impairment loss. If the asset's carrying amount exceeds its undiscounted expected future cash flows, the asset's carrying amount is considered unrecoverable and the impairment loss is measured as the excess of the carrying amount over the asset's fair value.

26 B is correct. The result on the sale of the vehicle equals

$$\begin{aligned}\text{Gain or loss on the sale} &= \text{Sale proceeds} - \text{Carrying amount}\\ &= \text{Sale proceeds} - (\text{Acquisition cost} - \text{Accumulated depreciation})\\ &= 85{,}000 - \{100{,}000 - [((100{,}000 - 10{,}000)/9 \text{ years}) \times 3 \text{ years}]\}\\ &= 15{,}000.\end{aligned}$$

27 A is correct. Gain or loss on the sale = Sale proceeds – Carrying amount. Rearranging this equation, Sale proceeds = Carrying amount + Gain or loss on sale. Thus, Sale price = (12 million – 2 million) + (–3.2 million) = 6.8 million.

28 C is correct. The carrying amount of the asset on the balance sheet is reduced by the amount of the impairment loss, and the impairment loss is reported on the income statement.

29 A is correct. The gain or loss on the sale of long-lived assets is computed as the sales proceeds minus the carrying amount of the asset at the time of sale. This is true under the cost and revaluation models of reporting long-lived assets. In the absence of impairment losses, under the cost model, the carrying amount will equal historical cost net of accumulated depreciation.

30 B is correct. IFRS do not require acquisition dates to be disclosed.

31 A is correct. IFRS do not require fair value of intangible assets to be disclosed.

32 C is correct. Under US GAAP, companies are required to disclose the estimated amortization expense for the next five fiscal years. Under US GAAP, there is no reversal of impairment losses. Disclosure of the useful lives—finite or indefinite and additional related details—is required under IFRS.

33 B is correct. Investment property earns rent. Investment property and property, plant, and equipment are tangible and long-lived.

34 C is correct. When a company uses the fair value model to value investment property, changes in the fair value of the property are reported in the income statement—not in other comprehensive income.

35 A is correct. Investment property earns rent. Inventory is held for resale, and property, plant, and equipment are used in the production of goods and services.

36 C is correct. A company will change from the fair value model to either the cost model or revaluation model when the company transfers investment property to property, plant, and equipment.

37 A is correct. Under both the revaluation model for property, plant, and equipment and the fair model for investment property, the asset's fair value must be able to be measured reliably. Under the fair value model, net income is affected by all changes in the asset's fair value. Under the revaluation model, any increase in an asset's value to the extent that it reverses a previous revaluation decrease will be recognized on the income statement and increase net income.

38 A is correct. Under IFRS, when using the cost model for its investment properties, a company must disclose useful lives. The method for determining fair value, as well as reconciliation between beginning and ending carrying amounts of investment property, is a required disclosure when the fair value model is used.

39 C is correct. Expensing rather than capitalising an investment in long-term assets will result in higher expenses and lower net income and net profit margin in the current year. Future years' incomes will not include depreciation expense related to these expenditures. Consequently, year-to-year growth in profitability will be higher. If the expenses had been capitalised, the carrying amount of the assets would have been higher and the 2009 total asset turnover would have been lower.

40 C is correct. In 2010, switching to an accelerated depreciation method would increase depreciation expense and decrease income before taxes, taxes payable, and net income. Cash flow from operating activities would increase because of the resulting tax savings.

41 B is correct. 2009 net income and net profit margin are lower because of the impairment loss. Consequently, net profit margins in subsequent years are likely to be higher. An impairment loss suggests that insufficient depreciation expense was recognized in prior years, and net income was overstated in prior years. The impairment loss is a non-cash item and will not affect operating cash flows.

42 A is correct. The estimated average remaining useful life is 20.75 years.

Estimate of remaining useful life = Net plant and equipment ÷ Annual depreciation expense

Net plant and equipment = Gross P & E – Accumulated depreciation
= €6000 – €1850 = €4150

Estimate of remaining useful life = Net P & E ÷ Depreciation expense
= €4150 ÷ €200 = 20.75

43 C is correct. The decision to capitalise the costs of the new computer system results in higher cash flow from operating activities; the expenditure is reported as an outflow of investing activities. The company allocates the capitalised amount over the asset's useful life as depreciation or amortisation expense rather than expensing it in the year of expenditure. Net income and total assets are higher in the current fiscal year.

44 B is correct. Alpha's fixed asset turnover will be lower because the capitalised interest will appear on the balance sheet as part of the asset being constructed. Therefore, fixed assets will be higher and the fixed asset turnover ratio (total revenue/average net fixed assets) will be lower than if it had expensed these costs. Capitalised interest appears on the balance sheet as part of the asset being constructed instead of being reported as interest expense in the period incurred. However, the interest coverage ratio should be based on interest payments, not interest expense (earnings before interest and taxes/interest payments), and should be unchanged. To provide a true picture of a company's interest coverage, the entire amount of interest expenditure, both the capitalised portion and the expensed portion, should be used in calculating interest coverage ratios.

45 A is correct. Accelerated depreciation will result in an improving, not declining, net profit margin over time, because the amount of depreciation expense declines each year. Under straight-line depreciation, the amount of depreciation expense will remain the same each year. Under the units-of-production method, the amount of depreciation expense reported each year varies with the number of units produced.

46 B is correct. The estimated average total useful life of a company's assets is calculated by adding the estimates of the average remaining useful life and the average age of the assets. The average age of the assets is estimated by dividing accumulated depreciation by depreciation expense. The average remaining useful life of the asset base is estimated by dividing net property, plant, and equipment by annual depreciation expense.

47 C is correct. The impairment loss is a non-cash charge and will not affect cash flow from operating activities. The debt to total assets and fixed asset turnover ratios will increase, because the impairment loss will reduce the carrying amount of fixed assets and therefore total assets.

48 A is correct. In an asset revaluation, the carrying amount of the assets increases. The increase in the asset's carrying amount bypasses the income statement and is reported as other comprehensive income and appears in equity under the heading of revaluation surplus. Therefore, shareholders' equity will increase but net income will not be affected, so return on equity will decline. Return on assets and debt to capital ratios will also decrease.

PRACTICE PROBLEMS

1 Using the straight-line method of depreciation for reporting purposes and accelerated depreciation for tax purposes would *most likely* result in a:
   A valuation allowance.
   B deferred tax asset.
   C temporary difference.

2 In early 2018 Sanborn Company must pay the tax authority €37,000 on the income it earned in 2017. This amount was recorded on the company's 31 December 2017 financial statements as:
   A taxes payable.
   B income tax expense.
   C a deferred tax liability.

3 Income tax expense reported on a company's income statement equals taxes payable, plus the net increase in:
   A deferred tax assets and deferred tax liabilities.
   B deferred tax assets, less the net increase in deferred tax liabilities.
   C deferred tax liabilities, less the net increase in deferred tax assets.

4 Analysts should treat deferred tax liabilities that are expected to reverse as:
   A equity.
   B liabilities.
   C neither liabilities nor equity.

5 Deferred tax liabilities should be treated as equity when:
   A they are not expected to reverse.
   B the timing of tax payments is uncertain.
   C the amount of tax payments is uncertain.

6 When both the timing and amount of tax payments are uncertain, analysts should treat deferred tax liabilities as:
   A equity.
   B liabilities.
   C neither liabilities nor equity.

7 When accounting standards require recognition of an expense that is not permitted under tax laws, the result is a:
   A deferred tax liability.
   B temporary difference.
   C permanent difference.

8 When certain expenditures result in tax credits that directly reduce taxes, the company will *most likely* record:
   A a deferred tax asset.
   B a deferred tax liability.
   C no deferred tax asset or liability.

9 When accounting standards require an asset to be expensed immediately but tax rules require the item to be capitalized and amortized, the company will *most likely* record:

A a deferred tax asset.

B a deferred tax liability.

C no deferred tax asset or liability.

10 A company incurs a capital expenditure that may be amortized over five years for accounting purposes, but over four years for tax purposes. The company will *most likely* record:

A a deferred tax asset.

B a deferred tax liability.

C no deferred tax asset or liability.

11 A company receives advance payments from customers that are immediately taxable but will not be recognized for accounting purposes until the company fulfills its obligation. The company will *most likely* record:

A a deferred tax asset.

B a deferred tax liability.

C no deferred tax asset or liability.

The following information relates to Questions 12–14

Note I
Income Taxes

The components of earnings before income taxes are as follows ($ thousands):

	Year 3	Year 2	Year 1
Earnings before income taxes:			
United States	$88,157	$75,658	$59,973
Foreign	116,704	113,509	94,760
Total	$204,861	$189,167	$154,733

The components of the provision for income taxes are as follows ($ thousands):

	Year 3	Year 2	Year 1
Income taxes			
Current:			
Federal	$30,632	$22,031	$18,959
Foreign	28,140	27,961	22,263
	$58,772	$49,992	$41,222
Deferred:			
Federal	($4,752)	$5,138	$2,336
Foreign	124	1,730	621

	Year 3	Year 2	Year 1
	(4,628)	6,868	2,957
Total	$54,144	$56,860	$44,179

12 In Year 3, the company's US GAAP income statement recorded a provision for income taxes *closest* to:

A $30,632.

B $54,144.

C $58,772.

13 The company's effective tax rate was *highest* in:

A Year 1.

B Year 2.

C Year 3.

14 Compared to the company's effective tax rate on US income, its effective tax rate on foreign income was:

A lower in each year presented.

B higher in each year presented.

C higher in some periods and lower in others.

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15 Zimt AG presents its financial statements in accordance with US GAAP. In Year 3, Zimt discloses a valuation allowance of $1,101 against total deferred tax assets of $19,201. In Year 2, Zimt disclosed a valuation allowance of $1,325 against total deferred tax assets of $17,325. The change in the valuation allowance *most likely* indicates that Zimt's:

A deferred tax liabilities were reduced in Year 3.

B expectations of future earning power has increased.

C expectations of future earning power has decreased.

16 Cinnamon, Inc. recorded a total deferred tax asset in Year 3 of $12,301, offset by a $12,301 valuation allowance. Cinnamon *most likely*:

A fully utilized the deferred tax asset in Year 3.

B has an equal amount of deferred tax assets and deferred tax liabilities.

C expects not to earn any taxable income before the deferred tax asset expires.

The following information relates to Questions 17–19

The tax effects of temporary differences that give rise to deferred tax assets and liabilities are as follows ($ thousands):

	Year 3	Year 2
Deferred tax assets:		
Accrued expenses	$8,613	$7,927
Tax credit and net operating loss carryforwards	2,288	2,554

(continued)

	Year 3	Year 2
LIFO and inventory reserves	5,286	4,327
Other	2,664	2,109
Deferred tax assets	18,851	16,917
Valuation allowance	(1,245)	(1,360)
Net deferred tax assets	$17,606	$15,557
Deferred tax liabilities:		
Depreciation and amortization	$(27,338)	$(29,313)
Compensation and retirement plans	(3,831)	(8,963)
Other	(1,470)	(764)
Deferred tax liabilities	(32,639)	(39,040)
Net deferred tax liability	($15,033)	($23,483)

17 A reduction in the statutory tax rate would *most likely* benefit the company's:

A income statement and balance sheet.

B income statement but not the balance sheet.

C balance sheet but not the income statement.

18 If the valuation allowance had been the same in Year 3 as it was in Year 2, the company would have reported $115 *higher*:

A net income.

B deferred tax assets.

C income tax expense.

19 Compared to the provision for income taxes in Year 3, the company's cash tax payments were:

A lower.

B higher.

C the same.

The following information relates to Questions 20–22

A company's provision for income taxes resulted in effective tax rates attributable to loss from continuing operations before cumulative effect of change in accounting principles that varied from the statutory federal income tax rate of 34 percent, as summarized in the table below.

Year Ended 30 June	Year 3	Year 2	Year 1
Expected federal income tax expense (benefit) from continuing operations at 34 percent	($112,000)	$768,000	$685,000
Expenses not deductible for income tax purposes	357,000	32,000	51,000
State income taxes, net of federal benefit	132,000	22,000	100,000

Year Ended 30 June	Year 3	Year 2	Year 1
Change in valuation allowance for deferred tax assets	(150,000)	(766,000)	(754,000)
Income tax expense	$227,000	$56,000	$82,000

20 In Year 3, the company's net income (loss) was *closest* to:

A ($217,000).

B ($329,000).

C ($556,000).

21 The $357,000 adjustment in Year 3 *most likely* resulted in:

A an increase in deferred tax assets.

B an increase in deferred tax liabilities.

C no change to deferred tax assets and liabilities.

22 Over the three years presented, changes in the valuation allowance for deferred tax assets were *most likely* indicative of:

A decreased prospect for future profitability.

B increased prospects for future profitability.

C assets being carried at a higher value than their tax base.

SOLUTIONS

1 C is correct. Because the differences between tax and financial accounting will correct over time, the resulting deferred tax liability, for which the expense was charged to the income statement but the tax authority has not yet been paid, will be a temporary difference. A valuation allowance would only arise if there was doubt over the company's ability to earn sufficient income in the future to require paying the tax.

2 A is correct. The taxes a company must pay in the immediate future are taxes payable.

3 C is correct. Higher reported tax expense relative to taxes paid will increase the deferred tax liability, whereas lower reported tax expense relative to taxes paid increases the deferred tax asset.

4 B is correct. If the liability is expected to reverse (and thus require a cash tax payment) the deferred tax represents a future liability.

5 A is correct. If the liability will not reverse, there will be no required tax payment in the future and the "liability" should be treated as equity.

6 C is correct. The deferred tax liability should be excluded from both debt and equity when both the amounts and timing of tax payments resulting from the reversals of temporary differences are uncertain.

7 C is correct. Accounting items that are not deductible for tax purposes will not be reversed and thus result in permanent differences.

8 C is correct. Tax credits that directly reduce taxes are a permanent difference, and permanent differences do not give rise to deferred tax.

9 A is correct. The capitalization will result in an asset with a positive tax base and zero carrying value. The amortization means the difference is temporary. Because there is a temporary difference on an asset resulting in a higher tax base than carrying value, a deferred tax asset is created.

10 B is correct. The difference is temporary, and the tax base will be lower (because of more rapid amortization) than the carrying value of the asset. The result will be a deferred tax liability.

11 A is correct. The advances represent a liability for the company. The carrying value of the liability exceeds the tax base (which is now zero). A deferred tax asset arises when the carrying value of a liability exceeds its tax base.

12 B is correct. The income tax provision in Year 3 was \$54,144, consisting of \$58,772 in current income taxes, of which \$4,628 were deferred.

13 B is correct. The effective tax rate of 30.1 percent (\$56,860/\$189,167) was higher than the effective rates in Year 2 and Year 3.

14 A is correct. In Year 3 the effective tax rate on foreign operations was 24.2 percent [(\$28,140 + \$124)/\$116,704] and the effective US tax rate was [(\$30,632 − \$4,752)/\$88,157] = 29.4 percent. In Year 2 the effective tax rate on foreign operations was 26.2 percent and the US rate was 35.9 percent. In Year 1 the foreign rate was 24.1 percent and the US rate was 35.5 percent.

15 B is correct. The valuation allowance is taken against deferred tax assets to represent uncertainty that future taxable income will be sufficient to fully utilize the assets. By decreasing the allowance, Zimt is signaling greater likelihood that future earnings will be offset by the deferred tax asset.

16 C is correct. The valuation allowance is taken when the company will "more likely than not" fail to earn sufficient income to offset the deferred tax asset. Because the valuation allowance equals the asset, by extension the company expects *no* taxable income prior to the expiration of the deferred tax assets.

17 A is correct. A lower tax rate would increase net income on the income statement, and because the company has a net deferred tax liability, the net liability position on the balance sheet would also improve (be smaller).

18 C is correct. The reduction in the valuation allowance resulted in a corresponding reduction in the income tax provision.

19 B is correct. The net deferred tax liability was smaller in Year 3 than it was in Year 2, indicating that in addition to meeting the tax payments provided for in Year 3 the company also paid taxes that had been deferred in prior periods.

20 C is correct. The income tax provision at the statutory rate of 34 percent is a benefit of $112,000, suggesting that the pre-tax income was a loss of $112,000/0.34 = ($329,412). The income tax provision was $227,000. ($329,412) − $227,000 = ($556,412).

21 C is correct. Accounting expenses that are not deductible for tax purposes result in a permanent difference, and thus do not give rise to deferred taxes.

22 B is correct. Over the three-year period, changes in the valuation allowance reduced cumulative income taxes by $1,670,000. The reductions to the valuation allowance were a result of the company being "more likely than not" to earn sufficient taxable income to offset the deferred tax assets.

PRACTICE PROBLEMS

1 A company issues €1 million of bonds at face value. When the bonds are issued, the company will record a:
 A cash inflow from investing activities.
 B cash inflow from financing activities.
 C cash inflow from operating activities.

2 At the time of issue of 4.50% coupon bonds, the effective interest rate was 5.00%. The bonds were *most likely* issued at:
 A par.
 B a discount.
 C a premium.

3 Oil Exploration LLC paid $45,000 in printing, legal fees, commissions, and other costs associated with its recent bond issue. It is *most likely* to record these costs on its financial statements as:
 A an asset under US GAAP and reduction of the carrying value of the debt under IFRS.
 B a liability under US GAAP and reduction of the carrying value of the debt under IFRS.
 C a cash outflow from investing activities under both US GAAP and IFRS.

4 A company issues $1,000,000 face value of 10-year bonds on 1 January 2015 when the market interest rate on bonds of comparable risk and terms is 5%. The bonds pay 6% interest annually on 31 December. At the time of issue, the bonds payable reflected on the balance sheet is *closest* to:
 A $926,399.
 B $1,000,000.
 C $1,077,217.

5 Midland Brands issues three-year bonds dated 1 January 2015 with a face value of $5,000,000. The market interest rate on bonds of comparable risk and term is 3%. If the bonds pay 2.5% annually on 31 December, bonds payable when issued are most likely reported as *closest* to:
 A $4,929,285.
 B $5,000,000.
 C $5,071,401.

6 A firm issues a bond with a coupon rate of 5.00% when the market interest rate is 5.50% on bonds of comparable risk and terms. One year later, the market interest rate increases to 6.00%. Based on this information, the effective interest rate is:
 A 5.00%.
 B 5.50%.
 C 6.00%.

7 On 1 January 2010, Elegant Fragrances Company issues £1,000,000 face value, five-year bonds with annual interest payments of £55,000 to be paid each 31 December. The market interest rate is 6.0 percent. Using the effective interest rate method of amortisation, Elegant Fragrances is *most likely* to record:

- **A** an interest expense of £55,000 on its 2010 income statement.
- **B** a liability of £982,674 on the 31 December 2010 balance sheet.
- **C** a £58,736 cash outflow from operating activity on the 2010 statement of cash flows.

8 Consolidated Enterprises issues €10 million face value, five-year bonds with a coupon rate of 6.5 percent. At the time of issuance, the market interest rate is 6.0 percent. Using the effective interest rate method of amortisation, the carrying value after one year will be *closest* to:

- **A** €10.17 million.
- **B** €10.21 million.
- **C** €10.28 million.

9 A company issues €10,000,000 face value of 10-year bonds dated 1 January 2015 when the market interest rate on bonds of comparable risk and terms is 6%. The bonds pay 7% interest annually on 31 December. Based on the effective interest rate method, the interest expense on 31 December 2015 is *closest* to:

- **A** €644,161.
- **B** €700,000.
- **C** €751,521.

10 A company issues $30,000,000 face value of five-year bonds dated 1 January 2015 when the market interest rate on bonds of comparable risk and terms is 5%. The bonds pay 4% interest annually on 31 December. Based on the effective interest rate method, the carrying amount of the bonds on 31 December 2015 is *closest* to:

- **A** $28,466,099.
- **B** $28,800,000.
- **C** $28,936,215.

11 Lesp Industries issues five-year bonds dated 1 January 2015 with a face value of $2,000, 000 and 3% coupon rate paid annually on 31 December. The market interest rate on bonds of comparable risk and term is 4%. The sales proceeds of the bonds are $1,910,964. Under the effective interest rate method, the interest expense in 2017 is *closest* to:

- **A** $77,096.
- **B** $77,780.
- **C** $77,807.

12 For a bond issued at a premium, using the effective interest rate method, the:

- **A** carrying amount increases each year.
- **B** amortization of the premium increases each year.
- **C** premium is evenly amortized over the life of the bond.

13 Comte Industries issues $3,000,000 worth of three-year bonds dated 1 January 2015. The bonds pay interest of 5.5% annually on 31 December. The market interest rate on bonds of comparable risk and term is 5%. The sales proceeds of the bonds are $3,040,849. Under the straight-line method, the interest expense in the first year is *closest* to:

- **A** $150,000.
- **B** $151,384.
- **C** $152,042.

14 The management of Bank EZ repurchases its own bonds in the open market. They pay €6.5 million for bonds with a face value of €10.0 million and a carrying value of €9.8 million. The bank will *most likely* report:

A other comprehensive income of €3.3 million.

B other comprehensive income of €3.5 million.

C a gain of €3.3 million on the income statement.

15 A company redeems $1,000,000 face value bonds with a carrying value of $990,000. If the call price is 104 the company will:

A reduce bonds payable by $1,000,000.

B recognize a loss on the extinguishment of debt of $50,000.

C recognize a gain on the extinguishment of debt of $10,000.

16 Innovative Inventions, Inc. needs to raise €10 million. If the company chooses to issue zero-coupon bonds, its debt-to-equity ratio will *most likely*:

A rise as the maturity date approaches.

B decline as the maturity date approaches.

C remain constant throughout the life of the bond.

17 Fairmont Golf issued fixed rate debt when interest rates were 6 percent. Rates have since risen to 7 percent. Using only the carrying amount (based on historical cost) reported on the balance sheet to analyze the company's financial position would *most likely* cause an analyst to:

A overestimate Fairmont's economic liabilities.

B underestimate Fairmont's economic liabilities.

C underestimate Fairmont's interest coverage ratio.

18 Which of the following is an example of an affirmative debt covenant? The borrower is:

A prohibited from entering into mergers.

B prevented from issuing excessive additional debt.

C required to perform regular maintenance on equipment pledged as collateral.

19 Debt covenants are *least likely* to place restrictions on the issuer's ability to:

A pay dividends.

B issue additional debt.

C issue additional equity.

20 Regarding a company's debt obligations, which of the following is *most likely* presented on the balance sheet?

A Effective interest rate

B Maturity dates for debt obligations

C The portion of long-term debt due in the next 12 months

21 Compared to using a finance lease, a lessee that makes use of an operating lease will *most likely* report higher:

A debt.

B rent expense.

C cash flow from operating activity.

22 Which of the following is *most likely* a lessee's disclosure about operating leases?

A Lease liabilities.

B Future obligations by maturity.

C Net carrying amounts of leased assets.

23 For a lessor, the leased asset appears on the balance sheet and continues to be depreciated when the lease is classified as:

A a sales-type lease.

B an operating lease.

C a financing lease.

24 Under US GAAP, a lessor's reported revenues at lease inception will be *highest* if the lease is classified as:

A a sales-type lease.

B an operating lease.

C a direct financing lease.

25 A lessor will record interest income if a lease is classified as:

A a capital lease.

B an operating lease.

C either a capital or an operating lease.

26 Compared with a finance lease, an operating lease:

A is similar to renting an asset.

B is equivalent to the purchase of an asset.

C term is for the majority of the economic life of the asset.

27 Under US GAAP, which of the following would require the lessee to classify a lease as a capital lease?

A The term is 60% of the useful life of the asset.

B The lease contains an option to purchase the asset at fair value.

C The present value of the lease payments is 95% of the fair value.

28 A lessee that enters into a finance lease will report the:

A lease payable on its balance sheet.

B full lease payment on its income statement.

C full lease payment as an operating cash flow.

29 A company enters into a finance lease agreement to acquire the use of an asset for three years with lease payments of €19,000,000 starting next year. The leased asset has a fair market value of €49,000,000 and the present value of the lease payments is €47,250,188. Based on this information, the value of the lease payable reported on the company's balance sheet is *closest* to:

A €47,250,188.

B €49,000,000.

C €57,000,000.

30 Which of the following *best* describes reporting and disclosure requirements for a company that enters into an operating lease as the lessee? The operating lease obligation is:

A reported as a receivable on the balance sheet.

B disclosed in notes to the financial statements.

C reported as a component of debt on the balance sheet.

31 Cavalier Copper Mines has $840 million in total liabilities and $520 million in shareholders' equity. It discloses operating lease commitments over the next five years with a present value of $100 million. If the lease commitments are treated as debt, the debt-to-total-capital ratio is *closest* to:

A 0.58.

B 0.62.

C 0.64.

32 The following presents selected financial information for a company:

	$ Millions
Short-term borrowing	4,231
Current portion of long-term interest-bearing debt	29
Long-term interest-bearing debt	925
Average shareholders' equity	18,752
Average total assets	45,981

The financial leverage ratio is *closest* to:

A 0.113

B 0.277

C 2.452

33 An analyst evaluating three industrial companies calculates the following ratios:

	Company A	Company B	Company C
Debt-to-Equity	23.5%	22.5%	52.5%
Interest Coverage	15.6	49.5	45.5

The company with both the lowest financial leverage and the greatest ability to meet interest payments is:

A Company A.

B Company B.

C Company C.

34 An analyst evaluating a company's solvency gathers the following information:

	$ Millions
Short-term interest-bearing debt	1,258
Long-term interest-bearing debt	321
Total shareholder's equity	4,285
Total assets	8,750
EBIT	2,504
Interest payments	52

The company's debt-to-assets ratio is *closest* to:

A 0.18.

B 0.27.

C 0.37.

35 Penben Corporation has a defined benefit pension plan. At 31 December, its pension obligation is €10 million and pension assets are €9 million. Under either IFRS or US GAAP, the reporting on the balance sheet would be *closest* to which of the following?

A €10 million is shown as a liability, and €9 million appears as an asset.

B €1 million is shown as a net pension obligation.

C Pension assets and obligations are not required to be shown on the balance sheet but only disclosed in footnotes.

36 The following information is associated with a company that offers its employees a defined benefit plan:

Fair value of fund's assets	$1,500,000,000
Estimated pension obligations	$2,600,000,000
Present value of estimated pension obligations	$1,200,000,000

Based on this information, the company's balance sheet will present a net pension:

A asset of $300,000,000.

B asset of $1,400,000,000.

C liability of $1,100,000,000.

SOLUTIONS

1 B is correct. The company receives €1 million in cash from investors at the time the bonds are issued, which is recorded as a financing activity.

2 B is correct. The effective interest rate is greater than the coupon rate and the bonds will be issued at a discount.

3 A is correct. Under US GAAP, expenses incurred when issuing bonds are generally recorded as an asset and amortised to the related expense (legal, etc.) over the life of the bonds. Under IFRS, they are included in the measurement of the liability. The related cash flows are financing activities.

4 C is correct. The bonds will be issued at a premium because the coupon rate is higher than the market interest rate. The future cash outflows, the present value of the cash outflows, and the total present value are as follows:

Date	Interest Payment ($)	Present Value at Market Rate 5% ($)		Present Value at Market Rate 5% ($)	Total Present Value ($)
31 December 2015	60,000.00	57,142.86			
31 December 2016	60,000.00	54,421.77			
31 December 2017	60,000.00	51,830.26			
31 December 2018	60,000.00	49,362.15			
31 December 2019	60,000.00	47,011.57			
31 December 2020	60,000.00	44,772.92			
31 December 2021	60,000.00	42,640.88			
31 December 2022	60,000.00	40,610.36			
31 December 2023	60,000.00	38,676.53			
31 December 2024	60,000.00	36,834.80	1,000,000.00	613,913.25	
		463,304.10		613,913.25	1,077,217.35
					Sales Proceeds

The following illustrates the keystrokes for many financial calculators to calculate sales proceeds of $1,077,217.35:

Calculator Notation	Numerical Value for This Problem
N	10
% *i* or I/Y	5
FV	$1,000,000.00
PMT	$60,000.00
PV compute	X

Thus, the sales proceeds are reported on the balance sheet as an increase in long-term liability, bonds payable of $1,077,217.

5 A is correct. The bonds payable reported at issue is equal to the sales proceeds. The interest payments and future value of the bond must be discounted at the market interest rate of 3% to determine the sales proceeds.

Date	Interest Payment	Present Value at Market Rate (3%)	Face Value Payment	Present Value at Market Rate (3%)	Total Present Value
31 December 2015	$125,000.00	$121,359.22			
31 December 2016	$125,000.00	$117,824.49			
31 December 2017	$125,000.00	$114,392.71	$5,000,000.00	$4,575,708.30	
Total		$353,576.42		$4,575,708.30	$4,929,284.72

The following illustrates the keystrokes for many financial calculators to calculate sales proceeds of $4,929,284.72:

Calculator Notation	Numerical Value for This Problem
N	3
% *i* or I/Y	3.0
FV	$5,000,000.00
PMT	$125,000.00
PV compute	X

6 B is correct. The market interest rate at the time of issuance is the effective interest rate that the company incurs on the debt. The effective interest rate is the discount rate that equates the present value of the coupon payments and face value to their selling price. Consequently, the effective interest rate is 5.50%.

7 B is correct. The bonds will be issued at a discount because the market interest rate is higher than the stated rate. Discounting the future payments to their present value indicates that at the time of issue, the company will record £978,938 as both a liability and a cash inflow from financing activities. Interest expense in 2010 is £58,736 (£978,938 times 6.0 percent). During the year, the company will pay cash of £55,000 related to the interest payment, but interest expense on the income statement will also reflect £3,736 related to amortisation of the initial discount (£58,736 interest expense less the £55,000 interest payment). Thus, the value of the liability at 31 December 2010 will reflect the initial value (£978,938) plus the amortised discount (£3,736), for a total of £982,674. The cash outflow of £55,000 may be presented as either an operating or financing activity under IFRS.

8 A is correct. The coupon rate on the bonds is higher than the market rate, which indicates that the bonds will be issued at a premium. Taking the present value of each payment indicates an issue date value of €10,210,618. The interest expense is determined by multiplying the carrying amount at the beginning of the period (€10,210,618) by the market interest rate at the time of issue (6.0 percent) for an interest expense of €612,637. The value after one year will equal the beginning value less the amount of the premium amortised to date, which is the difference between the amount paid (€650,000) and the expense accrued (€612,637) or €37,363. €10,210,618 – €37,363 = €10,173,255 or €10.17 million.

9 A is correct. The future cash outflows, the present value of the cash outflows, and the total present value are as follows:

Date	Interest Payment (€)	Present Value at Market Rate 6% (€)		Present Value at Market Rate 6% (€)	Total Present Value (€)
31 December 2015	700,000.00	660,377.36			
31 December 2016	700,000.00	622,997.51			
31 December 2017	700,000.00	587,733.50			
31 December 2018	700,000.00	554,465.56			
31 December 2019	700,000.00	523,080.72			
31 December 2020	700,000.00	493,472.38			
31 December 2021	700,000.00	465,539.98			
31 December 2022	700,000.00	439,188.66			
31 December 2023	700,000.00	414,328.92			
31 December 2024	700,000.00	390,876.34	10,000,000.00	5,583,947.77	
		5,152,060.94		5,583,947.77	10,736,008.71
					Sales Proceeds

The following illustrates the keystrokes for many financial calculators to calculate sales proceeds of €10,736,008.71:

Calculator Notation	Numerical Value for This Problem
N	10
% *i* or I/Y	6
FV	$10,000,000.00
PMT	$700,000.00
PV compute	X

The interest expense is calculated by multiplying the carrying amount at the beginning of the year by the effective interest rate at issuance. As a result, the interest expense at 31 December 2015 is €644,161 (€10,736,008.71 × 6%).

10 C is correct. The future cash outflows, the present value of the cash outflows, and the total present value are as follows:

Date	Interest Payment ($)	Present Value at Market Rate 5% ($)		Present Value at Market Rate 5% ($)	Total Present Value ($)
31 December 2015	1,200,000	1,142,857.14			
31 December 2016	1,200,000	1,088,435.37			
31 December 2017	1,200,000	1,036,605.12			
31 December 2018	1,200,000	987,242.97			
31 December 2019	1,200,000	940,231.40	30,000,000	23,505,785.00	
		5,195,372.00		23,505,785.00	28,701,157.00
					Sales Proceeds

The following illustrates the keystrokes for many financial calculators to calculate sales proceeds of $28,701,157.00:

Calculator Notation	Numerical Value for This Problem
N	5
% *i* or I/Y	5
FV	$30,000,000.00
PMT	$1,200,000.00
PV compute	X

The following table illustrates interest expense, premium amortization, and carrying amount (amortized cost) for 2015.

Year	Carrying Amount (beginning of year)	Interest Expense (at effective interest rate of 5%)	Interest Payment (at coupon rate of 4%)	Amortization of Discount	Carrying Amount (end of year)
2015	$28,701,157.00	$1,435,057.85	$1,200,000.00	$235,057.85	$28,936,214.85

The carrying amount at the end of the year is found by adding the amortization of the discount to the carrying amount at the beginning of the year. As a result, the carrying amount on 31 December 2015 is $28,936,215.

Alternatively, the following illustrates the keystrokes for many financial calculators to calculate the carrying value at the end of first year of $28,936, 215:

Calculator Notation	Numerical Value for This Problem
N	4
% *i* or I/Y	5
FV	$30,000,000.00
PMT	$1,200,000.00
PV compute	X

11 B is correct. The interest expense for a given year is equal to the carrying amount at the beginning of the year times the effective interest of 4%. Under the effective interest rate method, the difference between the interest expense and the interest payment (based on the coupon rate and face value) is the discount amortized in the period, which increases the carrying amount annually. For 2017, the interest expense is the beginning carrying amount ($1,944,499) times the effective interest of 4%.

Year	Carrying Amount (beginning)	Interest Expense (at effective interest of 4%)	Interest Payment (at coupon rate of 3%)	Amortization of Discount	Carrying Amount (end of year)
2015	$1,910,964	$76,439	$60,000.00	$16,439	$1,927,403
2016	$1,927,403	$77,096	$60,000.00	$17,096	$1,944,499
2017	$1,944,499	$77,780	$60,000.00	$17,780	$1,962,279

12 B is correct. The amortization of the premium equals the interest payment minus the interest expense. The interest payment is constant and the interest expense decreases as the carrying amount decreases. As a result, the amortization of the premium increases each year.

13 B is correct. Under the straight-line method, the bond premium is amortized equally over the life of the bond. The annual interest payment is \$165,000 (\$3,000,000 × 5.5%) and annual amortization of the premium under the straight-line method is \$13,616 [(\$3,040,849 – \$3,000,000)/3)]. The interest expense is the interest payment less the amortization of the premium (\$165,000 – \$13,616 = \$151,384).

14 C is correct. A gain of €3.3 million (carrying amount less amount paid) will be reported on the income statement.

15 B is correct. If a company decides to redeem a bond before maturity, bonds payable is reduced by the carrying amount of the debt. The difference between the cash required to redeem the bonds and the carrying amount of the bonds is a gain or loss on the extinguishment of debt. Because the call price is 104 and the face value is \$1,000,000, the redemption cost is 104% of \$1,000,000 or \$1,040,000. The company's loss on redemption would be \$50,000 (\$990,000 carrying amount of debt minus \$1,040,000 cash paid to redeem the callable bonds).

16 A is correct. The value of the liability for zero-coupon bonds increases as the discount is amortised over time. Furthermore, the amortised interest will reduce earnings at an increasing rate over time as the value of the liability increases. Higher relative debt and lower relative equity (through retained earnings) will cause the debt-to-equity ratio to increase as the zero-coupon bonds approach maturity.

17 A is correct. When interest rates rise, bonds decline in value. Thus, the carrying amount of the bonds being carried on the balance sheet is higher than the market value. The company could repurchase the bonds for less than the carrying amount, so the economic liabilities are overestimated. Because the bonds are issued at a fixed rate, there is no effect on interest coverage.

18 C is correct. Affirmative covenants require certain actions of the borrower. Requiring the company to perform regular maintenance on equipment pledged as collateral is an example of an affirmative covenant because it requires the company to do something. Negative covenants require that the borrower not take certain actions. Prohibiting the borrower from entering into mergers and preventing the borrower from issuing excessive additional debt are examples of negative covenants.

19 C is correct. Covenants protect debtholders from excessive risk taking, typically by limiting the issuer's ability to use cash or by limiting the overall levels of debt relative to income and equity. Issuing additional equity would increase the company's ability to meet its obligations, so debtholders would not restrict that ability.

20 C is correct. The non-current liabilities section of the balance sheet usually includes a single line item of the total amount of a company's long-term debt due after 1 year, and the current liabilities section shows the portion of a company's long-term debt due in the next 12 months. Notes to the financial statements generally present the stated and effective interest rates and maturity dates for a company's debt obligations

21 B is correct. An operating lease is not recorded on the balance sheet (debt is lower), and lease payments are entirely categorised as rent (interest expense is lower.) Because the rent expense is an operating outflow but principal repayments are financing cash flows, the operating lease will result in lower cash flow from operating activity.

22 B is correct. The lessee will disclose the future obligation by maturity of its operating leases. The future obligations by maturity, leased assets, and lease liabilities will all be shown for finance leases.

23 B is correct. When a lease is classified as an operating lease, the underlying asset remains on the lessor's balance sheet. The lessor will record a depreciation expense that reduces the asset's value over time.

24 A is correct. A sales-type lease treats the lease as a sale of the asset, and revenue is recorded at the time of sale equal to the present value of future lease payments. Under a direct financing lease, only interest income is reported as earned. Under an operating lease, revenue from rent is reported when collected.

25 A is correct. A portion of the payments for capital leases, either direct financing or sales-type, is reported as interest income. With an operating lease, all revenue is recorded as rental revenue.

26 A is correct. An operating lease is an agreement that allows the lessee to use an asset for a period of time. Thus, an operating lease is similar to renting an asset, whereas a finance lease is equivalent to the purchase of an asset by the lessee that is directly financed by the lessor.

27 C is correct. If the present value of the lease payments is greater than 90% of the fair value of the asset, the lease is considered a capital lease. A lease with a term that is 75% or more of the useful life of the asset is deemed to be a capital lease. The option to purchase the asset must be deemed to be cheap (bargain purchase option), not just include the option to purchase the asset.

28 A is correct. A finance lease is similar to borrowing money and buying an asset; a company that enters into a finance lease as the lessee reports an asset (leased asset) and related debt (lease payable) on its balance sheet. A company that enters into a finance lease as the lessee will report interest expense and depreciation expense on its income statement. A company that enters into an operating lease will report the lease payment on its income statement. For a finance lease, only the portion of the lease payment relating to interest expense reduces operating cash flow; the portion of the lease payment that reduces the lease liability appears as a cash outflow in the financing section. A company that enters into an operating lease as the lessee will report the full lease payment as an operating cash outflow.

29 A is correct. A company that enters into a finance lease reports the value of both the leased asset and lease payable as the lower of the present value of future lease payments and the fair value of the leased asset. The present value of the future lease payments, €47,250,188, is lower than the fair market value of the leased asset, €49,000,000. The company will record a lease payable on the balance sheet of €47,250,188.

30 B is correct. An operating lease is economically similar to renting an asset. A company that enters into an operating lease as a lessee reports a lease expense on its income statement during the period it uses the asset and reports no asset or liability on its balance sheet. The operating lease is disclosed in notes to the financial statements.

31 C is correct. The current debt-to-total-capital ratio is \$840/(\$840 + \$520) = 0.62. To adjust for the lease commitments, an analyst should add \$100 to both the numerator and denominator: \$940/(\$940 + \$520) = 0.64.

32 C is correct. The financial leverage ratio is calculated as follows:

$$\frac{\text{Average total assets}}{\text{Average shareholder's equity}} = \frac{\$45{,}981 \text{ million}}{\$18{,}752 \text{ million}} = \$2.452 \text{ million}$$

33 B is correct. Company B has the lowest debt-to-equity ratio, indicating the lowest financial leverage, and the highest interest coverage ratio, indicating the greatest number of times that EBIT covers interest payments.

34 A is correct because the debt-to-assets (total debt)/(total assets) ratio is (1,258 + 321)/(8,750) = 1,579/8,750 = 0.18

35 B is correct. The company will report a net pension obligation of €1 million equal to the pension obligation (€10 million) less the plan assets (€9 million).

36 A is correct. A company that offers a defined benefit plan makes payments into a pension fund and the retirees are paid from the fund. The payments that a company makes into the fund are invested until they are needed to pay retirees. If the fair value of the fund's assets is higher than the present value of the estimated pension obligation, the plan has a surplus and the company's balance sheet will reflect a net pension asset. Because the fair value of the fund's assets is $1,500,000,000 and the present value of estimated pension obligations is $1,200,000,000, the company will present a net pension asset of $300,000,000 on its balance sheet.

PRACTICE PROBLEMS

1 In contrast to earnings quality, financial reporting quality *most likely* pertains to:
  - A sustainable earnings.
  - B relevant information.
  - C adequate return on investment.

2 The information provided by a low-quality financial report will *most likely*:
  - A decrease company value.
  - B indicate earnings are not sustainable.
  - C impede the assessment of earnings quality.

3 To properly assess a company's past performance, an analyst requires:
  - A high earnings quality.
  - B high financial reporting quality.
  - C both high earnings quality and high financial reporting quality.

4 Low quality earnings *most likely* reflect:
  - A low-quality financial reporting.
  - B company activities which are unsustainable.
  - C information that does not faithfully represent company activities.

5 Earnings that result from non-recurring activities *most likely* indicate:
  - A lower-quality earnings.
  - B biased accounting choices.
  - C lower-quality financial reporting.

6 Which attribute of financial reports would *most likely* be evaluated as optimal in the financial reporting spectrum?
  - A Conservative accounting choices
  - B Sustainable and adequate returns
  - C Emphasized pro forma earnings measures

7 Financial reports of the lowest level of quality reflect:
  - A fictitious events.
  - B biased accounting choices.
  - C accounting that is non-compliant with GAAP.

8 When earnings are increased by deferring research and development (R&D) investments until the next reporting period, this choice is considered:
  - A non-compliant accounting.
  - B earnings management as a result of a real action.
  - C earnings management as a result of an accounting choice.

9 A high-quality financial report may reflect:
  - A earnings smoothing.
  - B low earnings quality.
  - C understatement of asset impairment.

10 If a particular accounting choice is considered aggressive in nature, then the financial performance for the reporting period would *most likely*:

- A be neutral.
- B exhibit an upward bias.
- C exhibit a downward bias.

11 Which of the following is *most likely* to reflect conservative accounting choices?

- A Decreased reported earnings in later periods
- B Increased reported earnings in the period under review
- C Increased debt reported on the balance sheet at the end of the current period

12 Which of the following is *most likely* to be considered a potential benefit of accounting conservatism?

- A A reduction in litigation costs
- B Less biased financial reporting
- C An increase in current period reported performance

13 Which of the following statements *most likely* describes a situation that would motivate a manager to issue low-quality financial reports?

- A The manager's compensation is tied to stock price performance.
- B The manager has increased the market share of products significantly.
- C The manager has brought the company's profitability to a level higher than competitors.

14 Which of the following concerns would *most likely* motivate a manager to make conservative accounting choices?

- A Attention to future career opportunities
- B Expected weakening in the business environment
- C Debt covenant violation risk in the current period

15 Which of the following conditions *best* explains why a company's manager would obtain legal, accounting, and board level approval prior to issuing low-quality financial reports?

- A Motivation
- B Opportunity
- C Rationalization

16 A company is experiencing a period of strong financial performance. In order to increase the likelihood of exceeding analysts' earnings forecasts in the next reporting period, the company would *most likely* undertake accounting choices for the period under review that:

- A inflate reported revenue.
- B delay expense recognition.
- C accelerate expense recognition.

17 Which of the following situations represents a motivation, rather than an opportunity, to issue low-quality financial reports?

- A Poor internal controls
- B Search for a personal bonus
- C Inattentive board of directors

18 Which of the following situations will *most likely* motivate managers to inflate reported earnings?

- **A** Possibility of bond covenant violation
- **B** Earnings in excess of analysts' forecasts
- **C** Earnings that are greater than the previous year

19 Which of the following *best* describes an opportunity for management to issue low-quality financial reports?

- **A** Ineffective board of directors
- **B** Pressure to achieve some performance level
- **C** Corporate concerns about financing in the future

20 An audit opinion of a company's financial reports is *most likely* intended to:

- **A** detect fraud.
- **B** reveal misstatements.
- **C** assure that financial information is presented fairly.

21 If a company uses a non-GAAP financial measure in an SEC filing, then the company must:

- **A** give more prominence to the non-GAAP measure if it is used in earnings releases.
- **B** provide a reconciliation of the non-GAAP measure and equivalent GAAP measure.
- **C** exclude charges requiring cash settlement from any non-GAAP liquidity measures.

22 A company wishing to increase earnings in the reporting period may choose to:

- **A** decrease the useful life of depreciable assets.
- **B** lower estimates of uncollectible accounts receivables.
- **C** classify a purchase as an expense rather than a capital expenditure.

23 Bias in revenue recognition would *least likely* be suspected if:

- **A** the firm engages in barter transactions.
- **B** reported revenue is higher than the previous quarter.
- **C** revenue is recognized before goods are shipped to customers.

24 Which technique *most likely* increases the cash flow provided by operations?

- **A** Stretching the accounts payable credit period
- **B** Applying all non-cash discount amortization against interest capitalized
- **C** Shifting classification of interest paid from financing to operating cash flows

25 Which of the following is an indication that a company may be recognizing revenue prematurely? Relative to its competitors, the company's:

- **A** asset turnover is decreasing.
- **B** receivables turnover is increasing.
- **C** days sales outstanding is increasing.

26 Which of the following would *most likely* signal that a company may be using aggressive accrual accounting policies to shift current expenses to later periods? Over the last five-year period, the ratio of cash flow to net income has:

- **A** increased each year.
- **B** decreased each year.
- **C** fluctuated from year to year.

27 An analyst reviewing a firm with a large reported restructuring charge to earnings should:

A view expenses reported in prior years as overstated.

B disregard it because it is solely related to past events.

C consider making pro forma adjustments to prior years' earnings.

SOLUTIONS

1 B is correct. Financial reporting quality pertains to the quality of information in financial reports. High-quality financial reporting provides decision-useful information, which is relevant and faithfully represents the economic reality of the company's activities. Earnings of high quality are sustainable and provide an adequate level of return. Highest-quality financial reports reflect both high financial reporting quality and high earnings quality.

2 C is correct. Financial reporting quality pertains to the quality of the information contained in financial reports. High-quality financial reports provide decision-useful information that faithfully represents the economic reality of the company. Low-quality financial reports impede assessment of earnings quality. Financial reporting quality is distinguishable from earnings quality, which pertains to the earnings and cash generated by the company's actual economic activities and the resulting financial condition. Low-quality earnings are not sustainable and decrease company value.

3 B is correct. Financial reporting quality pertains to the quality of the information contained in financial reports. If financial reporting quality is low, the information provided is of little use in assessing the company's performance. Financial reporting quality is distinguishable from earnings quality, which pertains to the earnings and cash generated by the company's actual economic activities and the resulting financial condition.

4 B is correct. Earnings quality pertains to the earnings and cash generated by the company's actual economic activities and the resulting financial condition. Low-quality earnings are likely not sustainable over time because the company does not expect to generate the same level of earnings in the future or because earnings will not generate sufficient return on investment to sustain the company. Earnings that are not sustainable decrease company value. Earnings quality is distinguishable from financial reporting quality, which pertains to the quality of the information contained in financial reports.

5 A is correct. Earnings that result from non-recurring activities are unsustainable. Unsustainable earnings are an example of lower-quality earnings. Recognizing earnings that result from non-recurring activities is neither a biased accounting choice nor indicative of lower quality financial reporting because it faithfully represents economic events.

6 B is correct. At the top of the quality spectrum of financial reports are reports that conform to GAAP, are decision useful, and have earnings that are sustainable and offer adequate returns. In other words, these reports have both high financial reporting quality and high earnings quality.

7 A is correct. Financial reports span a quality continuum from high to low based on decision-usefulness and earnings quality (see Exhibit 2 of the reading). The lowest-quality reports portray fictitious events, which may misrepresent the company's performance and/or obscure fraudulent misappropriation of the company's assets.

8 B is correct. Deferring research and development (R&D) investments into the next reporting period is an example of earnings management by taking a *real* action.

9 B is correct. High-quality financial reports offer useful information, meaning information that is relevant and faithfully represents actual performance. Although low earnings quality may not be desirable, if the reported earnings

are representative of actual performance, they are consistent with high-quality financial reporting. Highest-quality financial reports reflect both high financial reporting quality and high earnings quality.

10 B is correct. Aggressive accounting choices aim to enhance the company's reported performance by inflating the amount of revenues, earnings, and/or operating cash flow reported in the period. Consequently, the financial performance for that period would most likely exhibit an upward bias.

11 C is correct. Accounting choices are considered conservative if they decrease the company's reported performance and financial position in the period under review. Conservative choices may increase the amount of debt reported on the balance sheet. They may decrease the revenues, earnings, and/or operating cash flow reported for the period and increase those amounts in later periods.

12 A is correct. Conservatism reduces the possibility of litigation and, by extension, litigation costs. Rarely, if ever, is a company sued because it understated good news or overstated bad news. Accounting conservatism is a type of bias in financial reporting that decreases a company's reported performance. Conservatism directly conflicts with the characteristic of neutrality.

13 A is correct. Managers often have incentives to meet or beat market expectations, particularly if management compensation is linked to increases in stock prices or to reported earnings.

14 B is correct. Managers may be motivated to understate earnings in the reporting period and increase the probability of meeting or exceeding the next period's earnings target.

15 C is correct. Typically, conditions of opportunity, motivation, and rationalization exist when individuals issue low-quality financial reports. Rationalization occurs when an individual is concerned about a choice and needs to be able to justify it to herself or himself. If the manager is concerned about a choice in a financial report, she or he may ask for other opinions to convince herself or himself that it is okay.

16 C is correct. In a period of strong financial performance, managers may pursue accounting choices that increase the probability of exceeding earnings forecasts for the next period. By accelerating expense recognition or delaying revenue recognition, managers may inflate earnings in the next period and increase the likelihood of exceeding targets.

17 B is correct. Motivation can result from pressure to meet some criteria for personal reasons, such as a bonus, or corporate reasons, such as concern about future financing. Poor internal controls and an inattentive board of directors offer opportunities to issue low-quality financial reports.

18 A is correct. The possibility of bond covenant violations may motivate managers to inflate earnings in the reporting period. In so doing, the company may be able to avoid the consequences associated with violating bond covenants.

19 A is correct. Opportunities to issue low-quality financial reports include internal conditions, such as an ineffective board of directors, and external conditions, such as accounting standards that provide scope for divergent choices. Pressure to achieve a certain level of performance and corporate concerns about future financing are examples of motivations to issue low-quality financial reports. Typically, three conditions exist when low-quality financial reports are issued: opportunity, motivation, and rationalization.

20 C is correct. An audit is intended to provide assurance that the company's financial reports are presented fairly, thus providing discipline regarding financial reporting quality. Regulatory agencies usually require that the financial

statements of publicly traded companies be audited by an independent auditor to provide assurance that the financial statements conform to accounting standards. Privately held companies may also choose to obtain audit opinions either voluntarily or because an outside party requires it. An audit is not typically intended to detect fraud. An audit is based on sampling and it is possible that the sample might not reveal misstatements.

21 B is correct. If a company uses a non-GAAP financial measure in an SEC filing, it is required to provide the most directly comparable GAAP measure with equivalent prominence in the filing. In addition, the company is required to provide a reconciliation between the non-GAAP measure and the equivalent GAAP measure. Similarly, IFRS require that any non-IFRS measures included in financial reports must be defined and their potential relevance explained. The non-IFRS measures must be reconciled with IFRS measures.

22 B is correct. If a company wants to increase reported earnings, the company's managers may reduce the allowance for uncollected accounts and the related expense reported for the period. Decreasing the useful life of depreciable assets would increase depreciation expense and decrease earnings in the reporting period. Classifying a purchase as an expense, rather than capital expenditure, would decrease earnings in the reporting period. The use of accrual accounting may result in estimates in financial reports, because all facts associated with events may not be known at the time of recognition. These estimates can be grounded in reality or managed by the company to present a desired financial picture.

23 B is correct. Bias in revenue recognition can lead to manipulation of information presented in financial reports. Addressing the question as to whether revenue is higher or lower than the previous period is not sufficient to determine if there is bias in revenue recognition. Additional analytical procedures must be performed to identify warning signals of accounting malfeasance. Barter transactions are difficult to value properly and may result in bias in revenue recognition. Policies that make it easier to prematurely recognize revenue, such as before goods are shipped to customers, may be a warning sign of accounting malfeasance.

24 A is correct. Managers can temporarily show a higher cash flow from operations by stretching the accounts payable credit period. In other words, the managers delay payments until the next accounting period. Applying all non-cash discount amortization against interest capitalized causes reported interest expenses and operating cash outflow to be higher, resulting in a lower cash flow provided by operations. Shifting the classification of interest paid from financing to operating cash flows lowers the cash flow provided by operations.

25 C is correct. If a company's days sales outstanding (DSO) is increasing relative to competitors, this may be a signal that revenues are being recorded prematurely or are even fictitious. There are numerous analytical procedures that can be performed to provide evidence of manipulation of information in financial reporting. These warning signs are often linked to bias associated with revenue recognition and expense recognition policies.

26 B is correct. If the ratio of cash flow to net income for a company is consistently below 1 or has declined repeatedly over time, this may be a signal of manipulation of information in financial reports through aggressive accrual accounting

policies. When net income is consistently higher than cash provided by operations, one possible explanation is that the company may be using aggressive accrual accounting policies to shift current expenses to later periods.

27 C is correct. To extrapolate historical earnings trends, an analyst should consider making pro forma analytical adjustments of prior years' earnings to reflect in those prior years a reasonable share of the current period's restructuring and impairment charges.

PRACTICE PROBLEMS

1 Projecting profit margins into the future on the basis of past results would be *most* reliable when the company:

A is in the commodities business.

B operates in a single business segment.

C is a large, diversified company operating in mature industries.

2 Galambos Corporation had an average receivables collection period of 19 days in 2003. Galambos has stated that it wants to decrease its collection period in 2004 to match the industry average of 15 days. Credit sales in 2003 were \$300 million, and analysts expect credit sales to increase to \$400 million in 2004. To achieve the company's goal of decreasing the collection period, the change in the average accounts receivable balance from 2003 to 2004 that must occur is *closest* to:

A –\$420,000.

B \$420,000.

C \$836,000.

3 Credit analysts are likely to consider which of the following in making a rating recommendation?

A Business risk but not financial risk

B Financial risk but not business risk

C Both business risk and financial risk

4 When screening for potential equity investments based on return on equity, to control risk, an analyst would be *most likely* to include a criterion that requires:

A positive net income.

B negative net income.

C negative shareholders' equity.

5 One concern when screening for stocks with low price-to-earnings ratios is that companies with low P/Es may be financially weak. What criterion might an analyst include to avoid inadvertently selecting weak companies?

A Net income less than zero

B Debt-to-total assets ratio below a certain cutoff point

C Current-year sales growth lower than prior-year sales growth

6 When a database eliminates companies that cease to exist because of a merger or bankruptcy, this can result in:

A look-ahead bias.

B back-testing bias.

C survivorship bias.

7 In a comprehensive financial analysis, financial statements should be:

A used as reported without adjustment.

B adjusted after completing ratio analysis.

C adjusted for differences in accounting standards, such as international financial reporting standards and US generally accepted accounting principles.

8 When comparing a US company that uses the last in, first out (LIFO) method of inventory with companies that prepare their financial statements under international financial reporting standards (IFRS), analysts should be aware that according to IFRS, the LIFO method of inventory:

A is never acceptable.

B is always acceptable.

C is acceptable when applied to finished goods inventory only.

9 An analyst is evaluating the balance sheet of a US company that uses last in, first out (LIFO) accounting for inventory. The analyst collects the following data:

	31 Dec 05	31 Dec 06
Inventory reported on balance sheet	$500,000	$600,000
LIFO reserve	$ 50,000	$70,000
Average tax rate	30%	30%

After adjusting the amounts to convert to the first in, first out (FIFO) method, inventory at 31 December 2006 would be closest to:

A $600,000.

B $620,000.

C $670,000.

10 An analyst gathered the following data for a company ($ millions):

	31 Dec 2000	31 Dec 2001
Gross investment in fixed assets	$2.8	$2.8
Accumulated depreciation	$1.2	$1.6

The average age and average depreciable life of the company's fixed assets at the end of 2001 are *closest* to:

	Average Age	Average Depreciable Life
A	1.75 years	7 years
B	1.75 years	14 years
C	4.00 years	7 years

11 To compute tangible book value, an analyst would:

A add goodwill to stockholders' equity.

B add all intangible assets to stockholders' equity.

C subtract all intangible assets from stockholders' equity.

12 Which of the following is an off-balance-sheet financing technique? The use of:

A capital leases.

B operating leases.

C the last in, first out inventory method.

13 To better evaluate the solvency of a company, an analyst would most likely add to total liabilities:

A the present value of future capital lease payments.

B the total amount of future operating lease payments.

C the present value of future operating lease payments.

SOLUTIONS

1 C is correct. For a large, diversified company, margin changes in different business segments may offset each other. Furthermore, margins are most likely to be stable in mature industries.

2 C is correct. Accounts receivable turnover is equal to 365/19 (collection period in days) = 19.2 for 2003 and needs to equal 365/15 = 24.3 in 2004 for Galambos to meet its goal. Sales/turnover equals the accounts receivable balance. For 2003, \$300,000,000/19.2 = \$15,625,000, and for 2004, \$400,000,000/24.3 = \$16,460,905. The difference of \$835,905 is the increase in receivables needed for Galambos to achieve its goal.

3 C is correct. Credit analysts consider both business risk and financial risk.

4 A is correct. Requiring that net income be positive would eliminate companies that report a positive return on equity only because both net income and shareholders' equity are negative.

5 B is correct. A lower value of debt/total assets indicates greater financial strength. Requiring that a company's debt/total assets be below a certain cutoff point would allow the analyst to screen out highly leveraged and, therefore, potentially financially weak companies.

6 C is correct. Survivorship bias exists when companies that merge or go bankrupt are dropped from the database and only surviving companies remain. Look-ahead bias involves using updated financial information in back-testing that would not have been available at the time the decision was made. Back-testing involves testing models in prior periods and is not, itself, a bias.

7 C is correct. Financial statements should be adjusted for differences in accounting standards (as well as accounting and operating choices). These adjustments should be made prior to common-size and ratio analysis.

8 A is correct. LIFO is not permitted under IFRS.

9 C is correct. To convert LIFO inventory to FIFO inventory, the entire LIFO reserve must be added back: \$600,000 + \$70,000 = \$670,000.

10 C is correct. The company made no additions to or deletions from the fixed asset account during the year, so depreciation expense is equal to the difference in accumulated depreciation at the beginning of the year and the end of the year, or \$0.4 million. Average age is equal to accumulated depreciation/depreciation expense, or \$1.6/\$0.4 = 4 years. Average depreciable life is equal to ending gross investment/depreciation expense = \$2.8/\$0.4 = 7 years.

11 C is correct. Tangible book value removes all intangible assets, including goodwill, from the balance sheet.

12 B is correct. Operating leases can be used as an off-balance-sheet financing technique because neither the asset nor liability appears on the balance sheet. Inventory and capital leases are reported on the balance sheet.

13 C is correct. The present value of future operating lease payments would be added to total assets and total liabilities.